THE MAGAZINE OF

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. . . international meetings draw world-wide representation — page 256

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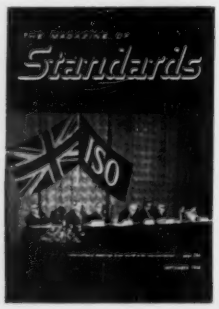

Officers and staff at the General Assembly of the International Organization for Standardization, Harrogate, England, 1958. From left to right—Dr Hilding Törnebohm, SKF Industries, Sweden, past president of ISO; W. Ruggaber, president of the Commission Suisse de Normalisation (Switzerland), ISO treasurer; Vice Admiral G. F. Hussey, Jr, USN (Ret), managing director of the American Standards Association, newly elected vice-president of ISO; Sir Roger Duncalfe (United Kingdom), ISO president; Henry St. Leger, general secretary of ISO; Dr Percy Dunsheath, IEC president (at time of ISO meeting); two interpreters.

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U.S. delegates who attended the meetings of the International Organization for Standardization and the International Electrotechnical Commission in England and Scandinavia early this summer were impressed with the interest in standardization overseas. This interest was not only evident in the international meetings. One delegate who took advantage of his trip to Europe to visit the Brussel's World's Fair found there an interesting booklet entitled "Standardization in France." This was a hand-out at an unusual display on French standards featured as part of the French World's Fair exhibits.

Among the paragraphs worth noting in this little booklet is the following: "Great attention is given to standardization by all branches of education in France. Technical education in particular systematically includes knowledge and practical application of French standards in its curricula, manuals, competitive and other examinations."

In England, reports were still being circulated, at the time of the ISO meetings, concerning the record attendance and interesting discussions at a meeting of British standards engineers held the previous month. This British group is in correspondence with the Standards Engineers Society in the USA.

Only 15 of the ISO committees held meetings at Harrogate. ISO/TC 61 on Plastics is one that did not. The ASA holds the secretariat for this committee. Its meeting this year will be in Washington, D. C., November 3-8. Delegates have been invited to come early and participate in a symposium on plastics and standardization being held by the American Society for Testing Materials at Philadelphia, Pa., October 30-31.

Ninth National Conference on Standards

Hotel Roosevelt, New York
November 18, 19, 20, 1958

This Month's Standards Personality

ROY P. TROWBRIDGE, director of General Motors' Engineering Standards Section, is currently receiving well-earned commendation for his leadership of the U.S. delegation on screw threads at the 1958 meetings of the International Organization for Standardization. (For his report, see page 266.) Mr Trowbridge has also actively participated in many of the meetings that are bringing about Unified (ABC) standards on screw threads and drawing practices in the United States, United Kingdom, and Canada.

Mr Trowbridge received his Bachelor's degree in mechanical engineering from Stanford University in 1940. He began his career with General Motors that same year as a junior test engineer at the General Motors Proving Grounds in Milford, Michigan. He was soon involved in the proving ground war activity of armored vehicle testing and spent the period from 1941 to 1945 as test project engineer at the Milford Proving Grounds and at the GM Phoenix, Arizona, Laboratory Desert Proving Grounds.

He served in the armed forces during 1945 and 1946 where his proving ground experience was put to good use in the Army Ground Forces Board No. 2 Proving Ground at Ft. Knox, Kentucky.

On returning to civilian life, Mr Trowbridge joined the staff of General Motors Research Division as research engineer and soon became interested in development of accurate specimens for surface finish measurement. He carried on much of the early development work on the precision reference specimens now recognized as American Standard.

In 1950 Mr Trowbridge was transferred to General Motors' Engineering Standards Section, and in 1956, on reassignment of Mr W. L. Barth, Mr Trowbridge was appointed director of the section. In General Motors, the Engineering Standards Section coordinates committee activities leading to formulation of Corporation opinion and is responsible for publication and distribution of the General Motors standards for parts, drafting, engineering procedures, and design features.

Since embarking on standards work, Mr Trowbridge has participated very closely in the work of ASA Sectional Committees B1 on Screw Threads; B18 on Bolts, Nuts, Screws, and Rivets; B27 on Washers and Snap Rings; B46 on Surface Roughness, Waviness, and Lay; B54 on Anti-Friction Bearing Codes; and Y14 on Drafting Standards. He is also a member of the ASA Standards Council; the Graphic Standards Board; and is an outgoing member of the Company Member Conference Administrative Committee. He will long be remembered as the genial, entertaining, and never-tiring host at GMC's 1958 spring meeting in Detroit.

In addition to his ASA activities, Mr Trowbridge is a member of parallel SAE technical standards committees. He is a member of the Society of Automotive Engineers, The American Society of Mechanical Engineers, and the Engineering Society of Detroit.

Aside from his work, Mr Trowbridge's main interests are his wife Virginia, daughter Susan, and son John. He is an enthusiastic tennis player and an expert in do-it-yourself projects around home and summer cottage.

International Organization for Standardization and International Electrotechnical Commission

HARROGATE, ENGLAND, and Stockholm, Sweden, offered hospitality to record delegations of standards personalities this year, representing almost every country that engages in foreign trade. The meetings of the International Organization for Standardization (Harrogate, June 9-21) and the International Electrotechnical Commission (Scandinavia, July 1-17) resulted in substantial gains toward international understanding and greater uniformity in standards.

This was the fourth plenary session of ISO, and it brought to Harrogate nearly 1000 delegates from 37 countries. Fifteen technical committees held meetings, and all reported substantial achievements (see pages 258-262).

Professor E. A. Wegelius, director of Finland's National Research Institute, was elected by ISO as its new president. He will take office January 1, 1959, succeeding Sir Roger Duncalfe (United Kingdom).

Vice Admiral George F. Hussey, Jr, USN (Ret), managing director of the American Standards Association, was elected ISO vice-president, succeeding Dr Carlo Rossi of the Italian standards association (UNI).

ISO re-elected the USSR member-body and elected the member-bodies of the Netherlands and Rumania as new members of its Council, which is responsible to member-bodies for the general policy and administration of ISO. Members now are France, Germany, India, Italy, Japan, Netherlands, Rumania, Sweden, United Kingdom, USA, USSR.

Speaking at the General Assembly banquet, F. J. Erroll, Parliamentary Secretary to the Board of Trade, paid the following tribute to Sir Roger Duncalfe, retiring president of ISO:

"Sir Roger Duncalfe is well known as a standards man and as an industrialist of vision and sound judgment. We in the United Kingdom owe a particular debt of gratitude to Sir Roger for his devotion to the work and welfare of the British Standards Institution. His benign manner has made its own contribution in soothing the passions which sometimes spring up in even the most standardized world. But behind that is a tenacity in pursuing

the progressive course and rejecting the second best which has been of lasting value in promoting standardization in this country and I know in the international work also."

The International Electrotechnical Commission, for more than 50 years the international standards organization in the electrical field, now the autonomous electrical division of the ISO, elected Dr Ivar Herlitz as its president. Dr Herlitz is president of the Swedish National Committee of IEC.

Dr Arnold Roth was re-elected IEC treasurer, and Clifton J. Stanford, engineer for the IEC Central Office, was appointed assistant secretary.

Approximately 900 delegates attended the IEC meetings at Stockholm, representing 28 of the 34 countries in which there are IEC national committees. Fifty-four technical committees and subcommittees held meetings (see report on pages 263-265.)

One of the important actions taken was to confirm admission of the National Committees of Rumania, Turkey, People's Republic of China, and Bulgaria as IEC members. The United States of America, the Union of Soviet Socialist Republics, and Spain were elected as new members of the administrative and policy-making Committee of Action of IEC.

As one of his first actions, Dr Herlitz, incoming president, appointed a new President's Preparatory Committee to assist in policy making. Members are: Professor Dr Richard Vieweg, Germany; R. C. Sogge, USA; P. Ailleret, France; H. A. R. Binney, England; General E. E. Wiener, Belgium; Dr Ing A. Roth, treasurer of IEC; and L. Ruppert, secretary of IEC.

Plans are already going forward for the next two IEC meetings. Madrid, Spain, has been chosen for 1959, June 30-July 10. An invitation from the Indian Standards Institution to meet in New Delhi in September or October, 1960, was also accepted.

Dr Richard Vieweg, president of the Physikalisch-Technische Bundesanstalt at Braunschweig, Germany, and president of the German National Committee of IEC, presented the Charles le Maistre Memorial Lecture. This was the fourth lecture in honor of IEC's first General Secretary. The first three lectures were given by Mr André Lange, France; Mr Clarence H. Linder, USA; and Professor Reginald O. Kapp, United Kingdom.

Dr Vieweg's subject was "Measuring — Standardizing — Producing." He traced the important role of weights and measures in man's life and in his entire history, calling attention to the many IEC technical committees that are concerned with present developments and changes in what is now known as "metrology." He mentioned the fact that IEC has friendly relations with the new International Organization for Legal Metrology, which now has a membership of 29 countries.

"It is one of the great marvels in the technical events of the last hundred years that both the tasks of producing in mass for expanding markets and for growing necessities, and of manufacturing parts with the highest precision, should find a solution, not only separately, but simultaneously," Dr Vieweg said. "The concepts of mass production and precision are not contradictory, mutually exclusive, but they are compatible, even useful to each other.

"Only on the twin bases of precision and standardization can the present development of automation be brought to fulfillment," he pointed out.

"The internationality of technology brings together mankind and nations as very few cultural phenomena can do," Dr Vieweg declared. And he continued, "The critics of the method of standardization should take leisure to study the character of our work, or to listen to the meetings of some technical committees of the IEC. They would probably be astonished to see how much clear thinking and good will they found. They might well come to the conclusion that standardization, together with the work of the International Electrotechnical Commission, carried out in the spirit of Charles le Maistre, can perfectly be identified with the aims of technology, as stated by Ortega y Gasset, 'It is the mission of technology to give Man the liberty to be human.' "

ISO and IEC:

substantial gains

toward

international

understanding

and greater

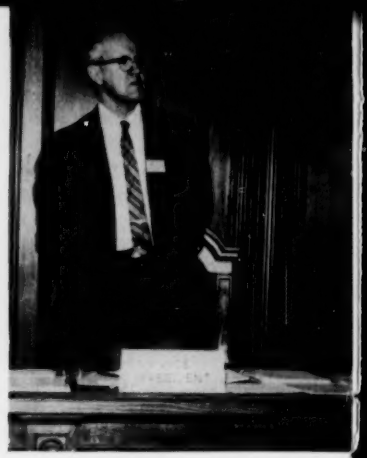
uniformity in

standards on

a world-wide

scale

ISO Technical Committees



Photos—Courtesy of British

SIR ROGER DUNCALFE, ISO president, opened ISO-HARROGATE-1958 at the conference headquarters, Royal Hall, on Monday, June 9. He told the delegates, " . . . a peaceful future for our civilization and a greater measure of happiness for all mankind depend more upon a steady rate of economic growth and a continuing expansion of world trade than on any other factor. So we must break down the barriers to that expansion."

During the meetings, delegates took Sir Roger's advice to "break down the barriers."

The working day started at 8:30 A.M. and went on into the early hours of the following morning. Regularly, the staff worked all night to run off urgent committee documents needed for the following morning. Reports of the meeting call attention to the "tremendous amount of work . . . accomplished each day and the friendly way in which it was carried out."

Some 60 delegates were present from the USA. There were close to 150 from the United Kingdom, more than 100 from France, 70 from Germany, 50 from Italy, and 30 from the USSR. In all, 30 of the member-bodies had their own representation while additional member-bodies were represented by proxy.

Special reproduction equipment had been installed to produce minutes and reports needed by the committees. Delegates were enthusiastic about the efficiency with which the entire meeting was handled.

The social activities also won high praise. These included a reception given by Her Majesty's Government, represented by F. J. Erroll, Parliamentary Secretary to the Board of Trade and Mrs Erroll, a banquet at which Mr Erroll was the principal speaker, tours to Bolton Abbey, York Minster, Harewood House (the home of the Princess Royal, the Queen's aunt), and a Sunday tour over the Yorkshire moors with a visit to Fountain Abbey.

Expressing its gratitude for their financial or other assistance, the British Standards Institution published a list of the many associations, companies, individuals, and institutions, as well as government authorities, that helped to make the ISO meeting such a success.

In addition to visits to local points of special interest, the ladies were entertained by the Women's Advisory Committee of the British Standards Institution. The committee takes an active part in many of the BSI committees of special interest to consumers and takes the leadership in publicizing the meaning of the BSI's certification label (the "kite" mark) on products meeting the requirements of British Standards.

The delegates also had an opportunity to visit important industrial points of interest, including the Dorman Long Steelworks, the Imperial Chemical Industries, the Metal Box Factory, and Skelton Grange power station.

Technical Committees

The technical committees that held meetings reported the following results:

Screw Threads, TC 1.—See unofficial report by Roy Trowbridge, head of USA delegation (page 266).

Steel, TC 17.—Sixty delegates from 23 countries attended, with E. W. Senior, commercial director of the British Iron and Steel Federation, as chairman. The USA does not participate in the work of this committee and was not represented at the meeting.

Agreement has already been reached on methods of test for steel sheet, strip, wire, and tubes. At Harrogate the delegates agreed on four proposed methods for the high-temperature testing of steel, which, reports indicate, will concern the production and export of boilers and other high-temperature and high-pressure apparatus operating at temperatures up to 1000 C.

Agreement was also reached on various methods of mechanical testing of tubes, expected to be of benefit in structural engineering and the fabrication of pressure vessels.

The committee's plans include consideration of international specifications for the materials themselves, in addition to further test methods.

Copper and Copper Alloys, TC 26.—This was the second meeting of TC 26. Gordon Weston, technical director of the British Standards Institution, was chairman. Forty-three delegates from 16 countries conferred dur-

Newly elected vice-president of ISO, Vice Admiral G. F. Hussey, Jr, USN (Ret), addresses the ISO Council meeting, while Sir Roger Duncalfe, ISO president, and Henry St. Leger, secretary-general, study material under discussion.

Standards Institution, unless otherwise indicated.

ing the four days of the meetings. Four delegates represented the USA, with J. S. Smart, Research Department, American Smelting and Refining Company, South Plainfield, N. J., as leader. Others in the delegation were L. H. Adam, Frankford Arsenal, U.S. Army Ordnance, Department of the Army, Philadelphia, Pa.; A. E. Beck, American Metal Company, Ltd, New York; and R. S. Pratt, chief plant metallurgist, Bridgeport Brass Company, Bridgeport, Conn. As the U.S. holds the secretariat for this committee, Mr Adam was selected to serve as secretary for the meeting.

The delegation plans to present its report at a special meeting September 3. Preliminary reports show that the committee agreed on three proposed ISO recommendations: Methods of test for residual (internal) stresses of copper and copper base alloys (mercurous nitrate test); methods of test for expansion of copper and copper alloy tubing (pin test); and classification of raw copper.

Important progress was made in drawing up two basic classifications, one for wrought copper and copper alloys, and the other for cast copper alloys, which include the chemical composition and mechanical properties of the alloys.

Delegates gave preliminary approval to a draft specification for electrolytic copper wire bar, cakes, slabs, billets, ingots, and ingot bars.

New projects to be taken up by working groups include tensile test for sheet and strip of thickness less than 0.5 mm; tensile test for wire of diameter less than 5 mm; tensile test for tubes; wrapping test for tubes; reversed bend test for sheet and wire; simple torsion test; and flattening test for tubes.

Cast Iron, TC 25.—No delegation was present from the USA. The object of this committee is to secure international agreement on standards for foundry pig iron and cast iron, with particular attention to coordination of nomenclature, definitions, and methods of test. A recommendation on tensile testing of grey cast iron was brought to virtual completion at Harrogate. When completed it is expected that it will enable manufacturers and users in any part of the world to compare this material on a uniform basis. The committee also reached agreement on a method for testing the hardness of grey cast iron.

Preliminary discussions were held on proposals for malleable cast iron and spheroidal and nodular graphite cast iron. It was agreed that work on impact testing should be continued by the International Committee for Testing Cast Iron.

Solid Mineral Fuels, TC 27.—The committee met for five days, with Donald Hicks, director of scientific control at the National Coal Board of the UK, as chairman. Nearly 60 delegates and observers were present from 19 countries. Four delegates represented the USA, led by Dr O. W. Rees, Illinois State Geological Survey, Urbana, Illinois. The other delegates were R. F. Abernethy, Bureau of Mines, U.S. Department of Interior, Pittsburgh, Pa.; C. R. Montgomery, carbonization engineer, Pittston-Chenchfield Coal Sales, Cleveland, Ohio; and C. C. Russell, manager, Gas and Coke Division, Research Group, Koppers Company, Pittsburgh, Pa. Because of the amount of work being done by this committee, it has been found necessary to reorganize the American group for the committee. Reorganization is now under way.

Delegates reviewed progress made in preparing about 40 standard methods for the determination of physical or chemical properties of coal. Of these, 14 have already been approved as draft ISO recommendations and as many more will go forward to that stage as a result of the Harrogate meetings.

Although it was the opinion of the meeting that the ultimate aim of international standardization must be to arrive at a single approved method, if at all possible, it was agreed that it is necessary at this time to continue the preparation of drafts for well-established alternative methods. All will be reviewed in the future and as many as possible eliminated. It was agreed that for the measurement of certain physical properties of coal and coke the standardization of a range of tests is necessary.

A new subcommittee on brown coals and lignites was established, with Poland as secretariat.

At Government reception for delegates, F. J. Errol (right) welcomes Henry St. Leger, ISO secretary general and Mrs St. Leger.

R. G. McAllister and Hugh Fort Henry (USA delegates) receive copies of "ISO Courier," published each day for delegates at Harrogate.

Dr Richard Vieweg, (standing, right) thanks Dr Ivar Herlitz (standing, left) for vase given to him by Swedish National Committee after he presented the Charles le Maistre Memorial Lecture.

Photo—S. David Hoffman

H. A. R. Binney, director, British Standards Institution (front), H. Thomas Hallowell, Jr, (left), ASA president, and John R. Townsend (center), ASA vice-president, at ISO Council.

More than 300 terms and definitions used in coal preparation presented in a draft recommendation were accepted as a basis for further discussion.

Cinematography, TC 36.—Paul Arnold, assistant to the technical director of Ansco, was chairman of the meeting. D. R. White, director, Research Laboratory, Photo Products Department, E. I. du Pont de Nemours & Company, was leader of the U.S. delegation. Sixty representatives from 12 countries attended the five-day series of meetings.

Among the subjects on which delegates reached agreement were film dimensions, luminance of screens, magnetic sound reproduction, magnetic striping, camera and projector image areas, and safety film. Wide-screen pictures and dimensions of motion pictures for television were also discussed.

A detailed report on the results of the meeting will be published next month.

Machine Tools, TC 39.—A. W. Meyer, Brown and Sharpe Manufacturing Company, Providence, R. I., represented the USA at the meetings of TC 39, June 9-13. Forty-five delegates representing 17 countries were present. Ingenieur General Pierre Salmon, Commissariat a la Normalisation, Paris, France, served as chairman.

Prior to the meeting, the USA had sent a number of documents to the committee for consideration. These included material on tapers for tool shanks, centers for lathes or other machine tools, lathe tool posts, T-slots for machine tools, and machine tool feeds and speeds.

Draft proposals on centers for lathes, lathe tool posts, and a machine tool test code were approved. Also approved was a proposal on machine tool feeds and speeds, on which the U.S. and the Netherlands went on record as not in favor.

Because of lack of interchangeability between the metric equivalent tables in a proposal on T-slots for machine tools and the American Standard B5.1-1949, the U.S. is to study the proposal and attempt to reach a solution.

Discussions showed a difference of opinion as to the merits of the cam lock provided in American Standard B5.9-1954 and the bayonet lock used in some of the other countries. Reports on the extent of use of these two types and the advantages of each are being sent to the French Secretariat by the USA and USSR, respectively.

Problems brought up at Harrogate concerning fits of grinding wheel bores and machine spindle flanges for grinding wheels are to be studied by the U.S. groups, and their viewpoints presented to the French Secretariat.

A further study is to be made of symbols for machine tool indication plates. The USA group is studying the question and will submit a proposal with reasons for the proposal and explanations as to why it is considered better than the ISO report.

Said Mr Meyer at the close of the meeting, "I think Sir Roger Duncalfe made a very good statement when he said in his opening remarks, ' . . . indeed no country

today can afford the luxury of not being a member of ISO.' "

Photography, TC 42.—Dr Deane R. White, research laboratory director of E. I. du Pont de Nemours & Company's Photo Products Department, was chairman of the committee's five-day meeting. Paul Arnold, assistant to the technical director, Ansco, was chief delegate from USA. Forty representatives from Belgium, France, Germany, Japan, Russia, Sweden, United Kingdom, and the United States made progress on the following subjects of special interest to the photographic industry: quantity packaging of sensitized goods, interchangeability of photographic goods from different manufacturers, standardization of photographic chemicals, and protection of packages of sensitized photographic goods in transit. They also considered a number of subjects of interest to the amateur photographer: lens and shutter marks, exposure meters, flash connections for cameras, photo speed and exposure index, sizes of stereo pictures on 35-mm film, and permanence of photographic images. (A more detailed report will be published next month.)

Pallets, TC 51.—The USA is not yet participating actively in the work of this committee, although Sectional Committee MH1 has indicated its desire to do so. No U.S. delegate attended the Harrogate meeting. C. Y. Hardie, special services officer, British Road Services, was chairman.

TC 51 had already produced one international recommendation covering three sizes of through-transit (non-captive) pallets in sizes 32 x 40 in., 32 x 48 in. and 40 x 48 in. At Harrogate, delegates completed the drafting of a second recommendation for large pallets, 48 x 64 in. and 48 x 72 in.

The committee also agreed on final amendments to a glossary of terms which will be published in English, French, and Russian. Equivalent terms in German (and other languages) will be added, if requested. Delegates also agreed on the basis for a recommendation on the testing of timber pallets to ensure their fitness for the job. A new working group will study the testing of metal pallets.

Hermetically Sealed Food Containers, TC 52.—H. A. R. Binney, director, British Standards Institution, was chairman of the meeting. Thirty-three delegates from 16 countries attended. Although the USA is not officially participating in the work of this committee, it was represented by an observer, Frank C. Elliott, Canners League of California.

Two draft recommendations were agreed upon, one for a range of nominal capacities and diameters of tins for milk; the other on 18 ranges of cans for such products as meat, soup, fruit, and vegetables. Nominal capacities in millilitres together with a permissible percentage deviation are provided. A number will indicate nominal capacity.

Mica, TC 56.—Twenty delegates represented Australia, France, India, the United Kingdom, the United States, and the USSR. Harold E. Brafman, Sprague Electric

WEGELIUS AND HERLITZ *ELECTED*

Edward Albert Wegelius, newly elected president of the International Organization for Standardization, has been professor at the National Institute for Technical Research of Finland and the Polytechnic School of Helsinki since 1945. He has been chief director of the Institute since 1948.

Professor Wegelius has a major interest in aeronautics. For years he was research chief at the Finland Aviation Union. His thesis for his doctorate (which he received from the Polytechnic School of Helsinki) was on the influence of centrifugal force on the moment of flexure in a family of airplane propellers—with particular application to propellers made of compressed wood. These propellers were developed by Professor Wegelius and were used during the war on several airplanes in place of metal propellers.

Professor Wegelius was president of the Finnish committee on standardization for aeronautics from 1939 to 1945, and has been president of the Finnish standards association since 1945. He took part in the meeting at London at which the International Organization for Standardization was founded in 1946, and has attended all the general assemblies of ISO since that time. He represented Finland on the ISO Council from 1954-1956.

Professor Wegelius is a member of the Academy of Technical Sciences of Finland and a corresponding member of the Royal Academy of Technical Sciences of Sweden.

Dr Ivar Herlitz, director of technology, ASEA, Västeras, Sweden, is the new president of the International Electrotechnical Commission. An electrical engineer, educated at the Technical University of Stockholm, he is a member of the Royal Swedish Academy of Engineering. Dr Herlitz has been active in electrical engineering, with emphasis on standardization problems, for 40 years. He has served IEC as a member of the Committee of Action and the President's Preparatory Committee, and has taken part in the work of such important standardizing committees as those concerned with switchgear and controlgear.

His work with ASEA started in the early 1920's, and he has worked both at Ludvika and at Vasteras. He is author of many articles published in technical periodicals, notable among them "The Dynamic Stability of Long Transmission Lines" (1928).

Dr Herlitz has been president of the Swedish National Committee of the IEC, and vice-president of the Swedish Testing Station for Electrical Appliances and Installation Equipment. He is a member of the American Institute of Electrical Engineers.

Company, North Adams, Mass., was the U.S. delegate. Chairman of the meeting was C. Rajgarhia, Federation of the Mica Association of Bihar, India.

Mr Brafman declared after the meeting that as the only delegate from USA "a tremendous amount of responsibility was vested in me. I can only emphasize the importance of sending at least two or three delegates to future ISO meetings."

Mr Brafman found that there were a number of items on the committee's agenda on which "we apparently had not devoted sufficient time in our regular meeting in USA." As chairman of the American Society for Testing Material's Section A, Subcommittee IX of ASTM D-9, the group that correlates the USA viewpoint for presentation to TC 56, Mr Brafman plans to hold at least one or two meetings per year solely devoted to ISO papers and recommendations. "By so doing," he says, "we should be in a much stronger position to discuss important issues. This should also promote good will and maintain our position as leaders in the field of mica."

Substantial progress was made at the Harrogate meeting in drafting proposals for visual classification of muscovite mica and grading of phlogopite mica. Action on a draft for grading muscovite mica splittings was deferred pending completion of a new American specification. A draft on thermal classification of phlogopite mica splittings will be given further consideration as to temperature limits appropriate to the various categories.

A great deal of interest was shown in the subject of master standard samples of mica for use in supplementing written quality specifications. Mr Brafman says that despite initial opposition by the United Kingdom to including provisions for visual master standards on the basis that they were considered impracticable to set up, his explanation of the history of their development in the USA and display of the set of standards that had been shipped from the USA melted the opposition and the UK delegate withdrew his country's objection.

On the question of muscovite mica splittings the U.S. knowledge and study of a controversial problem was taken into consideration by the committee. "When an impasse was reached at Harrogate, I was asked as to the U.S. viewpoint," Mr Brafman states. "I pointed out to the members present the results of our study of this problem and that we had practically completed a new specification. This we were going to submit to ISO as a draft proposal in about six months. I answered many questions as to the method and use of the new specifications, which appeared to please most everyone present." The committee decided to wait for this action.

The USSR was a participating member of the technical committee for the first time. They brought to the meeting a proposal for the use of a machine to check the hardness of mica that Mr Brafman found very interesting. "The simple test of striking a piece of mica with one's fingernail and judging it by the resulting sound has always been satisfactory in the industry," he explains. Since this operation is about the first in many sequences of handling and fabricating mica, the Russian proposal raises the question whether this may be the first operation for which mechanical means of testing and inspecting may be developed, he pointed out. The USSR delegation has undertaken to perform many tests to prove or disprove some of the findings as now accepted by the trade. At the present time Russia is purchasing large amounts of mica from India.

"If mica, as an important material in the field of electronics, may be expected to improve or even hold its position, more engineering representation must be available at the ISO meetings," in Mr Brafman's opinion. "As the field of electronics grows, the specifications of dielectrics will become more critical. Only in the past two years have our own importers realized this, hence the progress being made in revising the ASTM specifications and setting up visual standards. The agenda in ASTM for new specifications on muscovite splittings, film specifications, determination of maximum wave heights, electrical tests, thermal qualifications, and sampling methods, to name a few, strongly emphasize our position in the USA. This program, and the ISO program if it continues to develop, will enhance mica for many critical electronic devices."

Looking ahead, the ISO committee decided that its program should include electrical classification of mica, sampling methods, and the illustration of trade terms.

Method of Testing for Performance and Efficiency of Fuel-Using Equipment, TC 64.—Belgium, France, Germany, Hungary, India, and Italy were represented at this first meeting of TC 64. The United States is not a participating member of the committee, although current practice in the U.S., as well as that in Britain and Germany, will be taken into account by the committee. The committee plans to provide an international code on which contracts for acceptance tests may be based. The tests will be primarily concerned with the thermal efficiency of boilers.

Light Metals and Their Alloys, TC 79.—J. Duval, technical director of the French standards association, served as chairman of the meeting, at which 52 delegates represented 14 countries. L. H. Adam, Frankford Arsenal, U. S. Army Ordnance, Department of the Army, and David McIntyre, Aluminum Company of America, represented the USA.

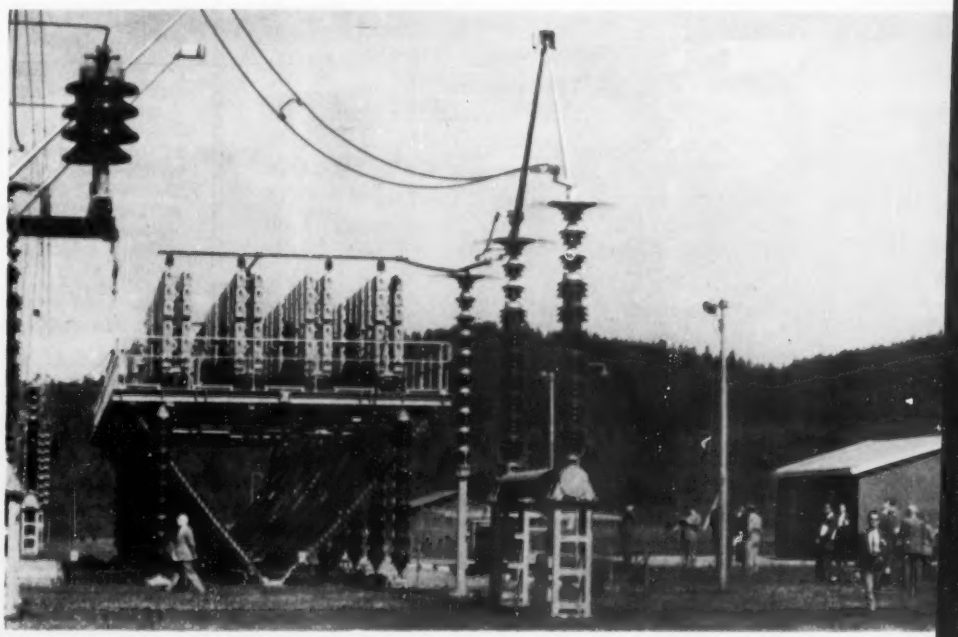
The committee has prepared recommendations relating to magnesium ingots and magnesium alloy ingots and castings. Draft recommendations for pure aluminum, aluminum alloy castings, and tensile and hardness testing of light alloys are well advanced. At Harrogate, agreement was reached on draft recommendations covering composition of magnesium zirconium alloy castings; compositions of four additional aluminum alloy castings; composition of wrought aluminum and aluminum alloys; and unalloyed magnesium defined as 99.95.

Nuclear Energy, TC 85.—For a report on the Harrogate meeting of ISO/TC 85, see THE MAGAZINE OF STANDARDS, August, page 233.

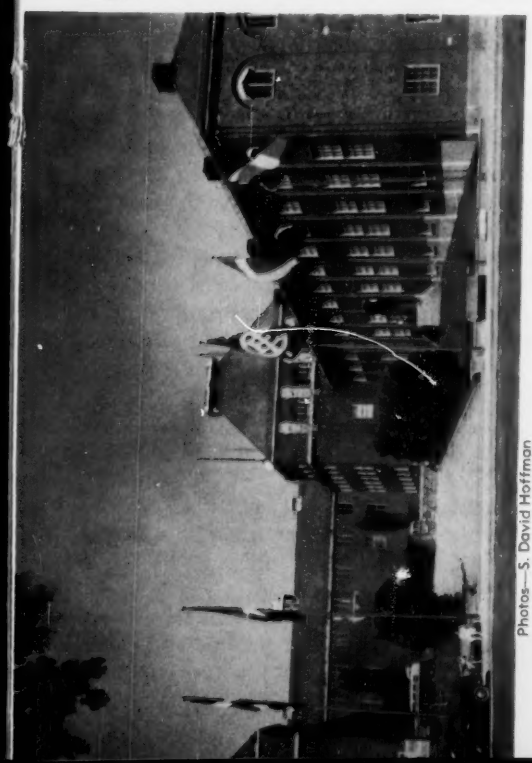
The IEC *in Scandinavia*

by S. DAVID HOFFMAN

Mr Hoffman is electrical engineer in charge, American Standards Association, and is secretary of the U.S. National Committee of the International Electrotechnical Commission.



Left—The Royal Institute of Technology, Stockholm, where IEC technical meetings were held. Note IEC flag. Below—Djurmo condenser station, the first 400 kv power line and series condenser substation in the world. The line transmits power from the Swedish hydro-power sources in the northern part of the country to population and load centers in the south. The station was visited by delegates attending the meetings at Ludvika (Grangarde).



Photos—S. David Hoffman

THE 1958 meetings of the International Electrotechnical Commission will long be remembered for the records they set—in number of delegates, countries represented, number of technical meetings in session, the efficiency with which the many requirements of those in attendance were serviced, and certainly for results.

The USA delegation consisted of 63 members, led by Richard C. Sogge, manager, Engineering Services, General Electric Company, and president of the U.S. National Committee of IEC. The other officers of the USNC also attended—Hendley Blackmon, Westinghouse Electric Corporation, and V. M. Graham, Electronic Industries Association, vice-chairmen; S. David Hoffman, American Standards Association, secretary, and Vice Admiral G. F. Hussey, Jr, USN (Ret), managing director of ASA, treasurer.

In making his report, the secretary of the IEC noted that more than 1000 separate documents had been circulated to the national committees during the first half of 1958. During the Stockholm meeting, 45 draft recommendations were accepted for circulation to the national committees of the IEC for final vote (see boxed listing).

Ten documents were accepted for final publication (see list on page 265).

Dr Carl C. Chambers of the USA, vice-president in charge of engineering affairs, University of Pennsylvania, was one of the new chairmen of technical committees appointed during the meeting. Dr Chambers was named chairman of IEC/TC 24 on Electric and Magnetic Magnitudes and Units.

Spain, USA, and USSR were elected to nine year terms on the IEC Committee of Action, replacing Belgium, Italy, and the United Kingdom.

At the Committee of Action meeting it was reported that IEC/TC 1 on Nomenclature had started work on Group 26, Nuclear Power Plants for Electric Generation, and Group 66, Detection and Measurement by Electrical Means of Nuclear Radiation, for eventual inclusion in the International Electrotechnical Vocabulary. A method was agreed upon at the ISO meetings in Harrogate that will avoid conflict and duplication of effort between IEC/TC 1 and Subcommittee 1 on Terminology, Definitions, Units, and Symbols of ISO/TC 85, Nuclear Energy.

The International Atomic Energy Agency and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) have agreed to contribute financially, on a fifty-fifty basis, to publication of the International Electrotechnical Vocabulary by IEC. The Vocabulary is being published in eight languages. A revised edition is now being produced. The part relating to atomic energy is to be drawn up with the help of the IAEA and UNESCO.

A new working group will deal with the influence of radiation on insulating materials. This will be designated Working Group 8 of TC 15 on Insulating Materials.

A new technical committee, authorized at the Stockholm meeting, will deal with electrical measuring instruments used in the application of radio isotopes and personal protection. The German national committee will act as secretariat. The German secretariat has asked the U.S. national committee to nominate an individual to serve as chairman of this most important new technical committee.

A suggestion by the U.S. national committee for an international system of coding to identify lamps used in motion picture and still picture projectors was approved in principle by the Committee of Action. This action was taken on recommendation of the President's Preparatory Committee (PPC). In making the suggestion, which would set up an international system similar to the coding system used in the USA, the USNC had offered to serve as agent of the Central Office of IEC in assigning and recording these code designations on an international basis. The service would be performed for a nominal fee. The suggestion had been made at the meeting of IEC/TC 34 on Lamps at its meeting in Moscow last year. The committee had indicated its interest in the proposal but referred it to the Committee of Action for decision on the question of policy. Following recommendation by the PPC at the Stockholm meeting, the Committee of Action accepted the scheme in principle. The scheme contemplated that the national committees of each country participating would send to the USNC the specifications of photo lamps for which companies in their country desired a code to be assigned. The Committee of Action asked TC 34 to proceed with the development of an IEC recommendation along the lines indicated.

TC 22 on Power Converting Equipment acted at its meeting this year to define more precisely its program and its title. It approved the following:

Title: Static Power Converters.
Scope: To prepare international recommendations regarding equipments and their components (including mechanical rectifiers) for static power conversion; i.e. rectification, inversion, frequency changing or d-c voltage transformation.
The scope also includes the following note:
Components which are comprised within this scope include electronic and semiconductor devices, e.g., poly- and monocrystalline diodes, power transistors, and control devices. The scope does not include telecommunication apparatus other than converters for power supplied to such apparatus, nor does it include rectifiers used as auxiliaries of measuring instruments.

DRAFT RECOMMENDATIONS TO NATIONAL

TC 3: Graphical Symbols
Valves, tubes and rectifiers
Switches
Measuring instruments
Chapter C: Transmission lines and accessories
Magnetic transductors
Batteries and accumulators

TC 7: Aluminum
Aluminum alloys of the Al-Mg-Si type for busbars
Commercial, hard-drawn aluminum electrical conductor wire
Galvanized steel wires for the mechanical reinforcement of steel-cored aluminum conductors
Aluminum electrical conductor wire having tempers other than hard

TC 12: Radio Communication
Safety requirements for electric mains operated radio receiving apparatus

TC 13: Measuring Instruments
Watt-hour meters

TC 15: Insulating Materials
Methods of test for electrical strength of solid insulating materials at power frequencies
Methods of measurement of insulation resistance of solid insulating materials
Standard temperatures and humidities for the measurement of the insulation resistivity and resistance of insulating materials
Conditioning of insulating materials for all types of electrical tests
Test procedure for evaluation of the thermal stability of enamelled wire by loss of electrical strength
Guide for the preparation of test procedures for the thermal evaluation of electrical insulating materials
Method for determining the comparative tracking index of solid insulating materials

TC 17: Switchgear and Controlgear
Rules for isolators and earthing switches

TC 20: Electric Cables
Tests on oil-filled cables and accessories

ACCEPTED FOR CIRCULATION COMMITTEES

TC 23: Electrical Accessories
Fuse links for miniature fuses
Fuses for domestic and similar general use

TC 29: Electroacoustics
Recommendations for magnetic tape recording and reproducing systems. Amendment to Publication 94
Recommendations for stereophonic disk records
Tolerances on the thickness of 45 rpm disks. Amendment to Publication 94
Recommendations for loudspeakers
Description of the IEC-reference coupler for the calibration of hearing aids employing earphones of the insert type
Specification for sound-level meters

TC 35: Primary Cells and Batteries
Capacities of radio HT batteries

TC 39: Electronic Tubes and Valves
Definitions of rating, rating systems, and 3 electrical rating systems for electron devices
Dimensions of electronic tubes and valves. Amendment to Publication 67, Part II
Specification for sockets for electronic tubes and valves
Dimensioning of wiring jigs and pin straighteners

TC 40: Components for Electronic Equipment
An extension of the specification for general-purpose aluminum electrolytic capacitors
Recommendations for radio-frequency cables. Appendix to Part I of IEC Publication 96
Standard impedances and diameters of R.F. cables. Revision of IEC Publication 78
General specification for rotary wafer switches
General specification for toggle switches
Specification sheets for toggle switches
Draft revision of IEC Publication 68: Part I, tests D, H, M, and tests T and U partly
Test F: Vibration
General classification of ferromagnetic oxides materials
Recommendations of terms and measuring methods for cores of ferromagnetic oxides for data-processing devices

TC 42: High-Voltage Testing Techniques
Voltage measuring with sphere-gaps (one sphere earthed)

The many technical committee meetings were interspersed with numerous activities, both technical and social. Since some of the technical committees had met outside of Stockholm, i.e., Copenhagen, Denmark, and Vasteras and Ludvika, Sweden, during the period July 1 to 7, their delegates were enabled to visit activities in the particular localities. Among these was a visit to ASEA Works at Ludvika which produces transformers, circuit breakers, and other high-voltage apparatus and rectifiers. This visit covered both the workshops and the laboratories, in particular the new short-circuit laboratory. The Ludvika delegates were treated to an excursion to Lake Siljan and Falun where they visited a mining museum and were entertained at a dinner given by the Stora Kopparbergs Bergslags AB, a leading Swedish concern. This excursion included a visit to the still-worked Falun Mine, in which mining has been carried on continuously since the eleventh or twelfth centuries. The company that owns this mine thus claims to be the oldest company in the world. Those groups meeting in Vasteras visited the ASEA Works in Vasteras, which concentrates on the production of large generators, rotating machinery, mechanical equipment, and low-voltage apparatus and switchgear. They also visited the main works of Telefon AB L M Ericsson, LME, in Stockholm, which concentrates on the manufacture, sale, and installation of all kinds of telecommunication equipment. The Vasteras and Ludvika groups were both entertained at dinners given by ASEA. Those meeting in Copenhagen under the sponsorship of the Danish national committee visited the dry cell factory of Hellesens, Ltd, and the Northern Cable and Wire Works at Vibeholmen. They, too, were royally entertained at receptions and luncheons, and at a dinner given by the Danish Electrotechnical Committee.

In Stockholm, during the period July 7 through 18, the number of technical and social events available was nearly overwhelming. Among the technical visits were an underground factory of Svenska AB Gasaccumulator, AGA; the Royal Institute of Technology; the first Swedish research reactor belonging to AB Atomenergi, Stockholm; the Research Institute for Experimental Nuclear Physics; the Swedish Bureau for Testing Electrical Equipment, SEMKO; the 380 kv substation at Enköping belonging to the Swedish State Power Board; the Electricity Supply substation of the underground railway in Stockholm; the signal tower and central traffic control office of the underground railway in Stockholm; the automatic telephone exchange in Stockholm belonging to the Royal Board of Telecommunications.

The numerous social events were highlighted by a reception at the City Hall, given by the City of Stockholm; opera performances at the Drottningholm Court Theater, built in 1766; a concert at the National Museum of Fine Arts; a most sumptuous banquet in the "Blue and Golden Halls" of the Stockholm City Hall; and alternate excursions on Lake Mälaren in the Stockholm archipelago; a visit to Upsala, the oldest university town in Sweden; a visit to the hydroelectric power station in northern Sweden at Nämforsen; and a visit to the high-voltage d-c/a-c converter station on the island of Gotland, where delegates roamed the mediaeval city of Visby.

DRAFT RECOMMENDATIONS ACCEPTED FOR FINAL PUBLICATION

TC 3: Graphical Symbols
Second list of graphical symbols—resistances, windings, etc
Symbols for machines and transformers

TC 12: Radio Communication
Methods of measurement on receivers for television broadcast transmissions
Methods of radiation-measurements on receivers for A.M., F.M., and T.V. broadcast transmissions
Amendments to Clause E of Publication 94, Recommendations for magnetic tape recording and reproducing systems—dimensions and characteristics
Methods of measurement of the electroacoustical characteristics of hearing aids

TC 40: Components for Electronic Equipment
Specification for receiver-type metallized mica capacitors
Specification for carbon resistors, type I
Supplement to the specification for carbon resistors, type II
Specification sheets for cables, IEC 50-7-11- or 13

Some of the delegates at the ISO/TC1 meeting on screw threads held last June in Harrogate, England.

Photo—Courtesy of British Standards Institution

INTERNATIONAL SCREW THREAD SYSTEMS STUDIED

by **R. P. Trowbridge**[1]

THE importance which American industry attaches to world-wide recognition of the Unified Screw Thread System is evidenced by the size of the delegation which attended the ISO/TC1 meeting on screw threads this past June in Harrogate. The delegation was acting under the auspices of ASA Sectional Committee B1. It was composed of I. H. Fullmer, U.S. Department of Commerce; W. G. Waltermire, Lamson & Sessions Company; E. J. Heldmann, Holo Krome Screw Corporation; R. M. Byrne, U.S. Machine and Cap Screw Bureaus; R. B. Belford, Industrial Fasteners Institute; W. H. Gourlie, Sheffield Corporation; G. A. Stimson, Greenfield Tap & Die Company; J. W. McNair, American Standards Association; F. Philippbar, American Society of Mechanical Engineers; and R. P. Trowbridge, General Motors Corporation, chairman of the delegation.

Before giving details of what transpired at the Harrogate meeting, a brief review of ISO/TC1 activity prior to the June meeting is in order.

[1]Mr Trowbridge is this month's Standard's Personality, see page 255.

ISO/TC1 early went on record to the effect that in the diameter range of 0.9 to 5 mm it would be preferable to establish a single series of threads approximating the diameter pitch combinations available in the BA, metric or national fine. This resolution was subsequently carried out in ISO Draft Recommendation No. 84 which also established the ISO thread profile. This is the same as the Unified thread profile. The provisions of Draft Recommendation No. 84 later were included as part of the Proposed Draft Recommendation, General Plan for Metric Screw Threads, ISO/TC1 (Secretariat 52) 143. Diameters and pitches for sizes 5.5 mm and above also formed a part of Document No. 143. All of the threads of this document were metrically conceived and expressed in metric units.

At the ISO/TC1 meeting in Lisbon in May 1957, the British, in cooperation with the Canadian and U.S. delegates, sponsored ISO adoption of threads of the Unified system in sizes ¼ inch through 6 inches. This proposal was accepted in principle, with the understanding that it was to be circulated to all member countries of ISO/TC1 for comment. Also, at the Lisbon meeting it was resolved that the ISO screw thread recommendations should offer general plans for both metric and inch screw threads with a selection of sizes from each general plan for application to bolts, nuts, and screws, and eventually a selection from the metric and inch bolt and nut screw threads for listing as preferred ISO screw threads for bolts, nuts, and screws.

In the seven months prior to the Harrogate meeting, members of Subcommittee 11 (of Sectional Committee B1) on International Cooperation completed a proposal for inch screw threads based on the present Unified and American Standard which included all sizes of the Unified screw threads and the numbered size coarse and fine series based on the Unified formulation. (The numbered sizes are now in the process of being accepted as Unified, on the same basis as sizes ¼ inch and above, by the British and Canadians.) The proposal, which was to be presented jointly by the U.S. and Canada, also recommended the use of the coarse and fine series threads for bolts and nuts. Prior to departure from the U.S., the American delegation met in April and May to develop arguments and determine what data would be required to support the U. S. position in ISO/TC1 and ABC meetings. (Subsequent to the ISO meetings, the American delegation continued discussions with the British and Canadians in London on ABC Unification topics.)

It was believed by the American, British, and Canadian delegations that there would be considerable opposition in ISO/TC1 to accepting the U.S. proposals because of the inclusion of the numbered sizes.[1] It was the concept of other members of TC1 that the requirements for a single series of screw threads from 0.25 to 5 mm had been met by the Draft ISO Recommendation No. 84 and that this recommendation was in complete agreement with the earlier resolution of TC1, regarding establishing a single series of ISO screw threads in this

range. At the TC1 meeting, however, the pattern was established whereby past resolutions and recommendations were reviewed and subsequently corrected in the light of later developments. In this manner, TC1 accepted the general plan, with some modifications, for metric screw threads and the table of selected metric screw threads for screws, bolts, and nuts contained in ISO/TC1 documents No. 143 and No. 144, respectively.

In presenting the American document ISO/TC1-142, the need for a series of inch screw threads paralleling the already accepted metric screw threads for sizes about 1.4 mm to 5 mm was emphasized by the American delegation. It was pointed out that the system of inch screw threads would be incomplete without carrying the sizes down to a point where the national miniature screw threads start. It was noted that the system as presented was now being followed in the USA, Canada, United Kingdom, and in many other countries. This contention was substantiated by presentation for review by TC1 members of a considerable sampling of American catalogs and screw thread standards showing the extent to which the Unified thread had achieved acceptance in the U.S.

In the meeting the discussion of the sizes ¼-inch diameter and over and sizes below ¼-inch diameter were separated in view of resolutions passed at Lisbon on acceptance of the larger sizes. Without much difficulty the new proposals for sizes ¼ inch and larger was accepted as superseding the earlier document, it being noted that the latest proposal incorporated more rational grouping of sizes in the uniform pitch series and that size increment gaps 1½ inch and 2 inches had been filled.

As had been anticipated, the opposition to the sizes below ¼ inch was strong. As the discussion progressed, those countries sponsoring the metric threads indicated a willingness to accept the numbered size inch threads on a temporary basis; however, the American delegation indicated that for the Americans to support this viewpoint would be misleading in that there was no apparent tendency in the U.S. or Canada toward use of metric threads in the size range of the numbered inch threads. The resolution finally agreed on after much debate reads as follows:

> *"TC1 Resolution 54: ISO inch screw threads with diameter below ¼ inch.* (8 Harrogate 1958) TC1 confirms that the aim fixed by TC1 Resolution 8 (3 New York 1952) could be fulfilled by Draft ISO Recommendation No. 84, but, in view of the actual situation, accepts as a parallel the sizes below ¼-inch diameter in TC1 Document 142 R as a first draft proposal."

The above resolution was accepted with but three abstentions.

At the Lisbon meetings in 1957, ISO/TC1 had accepted the UNC and UNF designations to apply to the Unified coarse and fine threads respectively. At the Harrogate meeting TC1 accepted the UNEF and UN designations to apply to the extra fine series and the uniform pitch series, respectively. The committee also recommended that, for an interim period, the Unified tolerances, according to ASA B1.1, should apply to ISO inch screw threads and that tolerances derived from the DIN standards should apply to the ISO metric screw threads. However, it is the hope of ISO/TC1 Working Group 2, Subgroup 1, that a single system of tolerances independent of the system of measurement should be the ultimate aim of TC1. In this recommendation there was unanimous concurrence.

Among other resolutions passed by TC1 were appointment of the USA as a member to the Tolerance Group—Working Group 2, Subgroup 1, and to the Research Group—Working Group 4. These resolutions were approved by the American delegation with the understanding that implementation would be subject to approval by ASA Sectional Committee B1.

In summation, the first steps toward recognition of the complete Unified standards as international standards have been accomplished. The extent to which the Unified screw thread standard gains acceptance outside the areas in which it is now used will depend largely on the degree to which its use is promoted by wide dissemination of American, British, and Canadian design practices and products outside the sphere of the inch-using countries. Another equally important influence on further acceptance of the Unified screw threads and American screw thread technology in general will be the extent to which the U.S. cooperates with the Working Groups of ISO/TC1. Other member countries of TC1 recognize the great amount of work and experience which the B1.1 and B1.2 standards represent. They are desirous of learning from the U.S. as much as possible of the Unified screw thread standards. They also would like to share data and experience on screw thread experimental development, manufacturing, and applications. A continued show of interest on the part of the U.S. by active participation, preparation of drafts, translations, conversion of inch tables into metric units, and official recognition of the ISO status of the Unified thread will assure ever wider acceptance of the Unified threads; hence, American products in international trade.

The next step in development of the Unified threads as ISO standards will be circulation of the TC1 document 142 R to all member countries of ISO/TC1 for comment and ratifying approval. At the end of the comment period and upon approval, the draft proposal will become a draft recommendation and will be circulated to all member nations of ISO for approval. It will be necessary for Sectional Committee B1 to be vigilant during these approval periods in order to be ready to answer the many questions which will undoubtedly arise. To that end, the American delegation, in making its report to Sectional Committee B1 will urge that Subcommittee 11 on International Cooperation be strengthened and that as correspondence and documents related to ISO/TC1 are received, they should be given thorough and rapid consideration by Subcommittee 11 and the sectional committee.

The ASEA factory (Allmänna Svenska Elektriska Aktiebolaget) at Ludvika where transformers, high voltage switchgear, rectifiers, and surge protection are manufactured. Delegates visited the Shortcircuit Laboratory and the Mono-chrystaline Laboratory.

Photo—S. David Hoffman

U.S. HELPS WORK ON INSULATING MATERIALS

Based on a report by J. F. Dexter, Dow Corning Corp.

DELEGATES from 19 nations attended the IEC meetings at Vasteras, Sweden, where Technical Committee 15, Insulating Materials, and Subcommittee 39-2, Semi-Conductor Devices (see page 270), held their discussions.

Dr A. H. Scott, National Bureau of Standards, U.S. chief delegate, headed a delegation of six at the meetings on insulating materials. Several members of the United States delegation also took part in an informal meeting of Subcommittee 2C on Classification of Insulating Materials to discuss the status of test procedures for evaluating the thermal endurance of insulating materials. J. F. Dexter, Dow Corning Corporation, Midland, Michigan, who attended this meeting, commented: "It was gratifying to the U.S. delegates that so much work is going on in Europe using the AIEE test procedures. Undoubtedly many useful suggestions will be forthcoming."

In this informal meeting, he reported, misunderstandings regarding the use of test procedures were eliminated. The need for establishing temperature classification of insulation based upon tests rather than definitions had been emphasized by K. N. Mathes, insulation system engineer, General Electric Company. The 1957 revision of AIEE No. 1, General Principles Upon which Temperature Limits Are Based in the Rating of Electrical Equipment, had confirmed the acceptance of this philosophy in the U.S. Insulation classes and their definition in this document follow closely IEC 85, Recommendations for the Classification of Materials for the Insulation of Electrical Machinery and Apparatus in Relation to Their Thermal Stability in Service, but Class E insulation temperature Class of 120 C, listed in IEC 85, has not been accepted in the U.S. This is because it is close to the 130 C (Class B) insulation class. However, European delegates believe the 120 C is needed due to the fact that many new plastic films, enamels, and varnishes can be used at 120 C. They believe this class may even replace Class A.

At the IEC Subcommittee 39-2 meeting: M. A. Acheson (USNC delegate), assistant to the chairman; V. M. Graham (technical advisor to USNC), chairman; J. M. Mercier, secretary; C. Aguer, assistant to the secretary.

Results of AIEE test programs were reviewed, including evaluation of a typical 105 C insulation system by the AIEE Rotating Machine Insulation Working Group, and a report on the thermal life of enameled magnet wire by the AIEE Electrical Insulation Committee's Working Group.

Control of moisture conditioning, current limits on voltage proof tests, and cycle times associated with motorette testing were discussed.

Suggestions were made that results obtained from

tests conducted according to proposed test procedures be gathered from individual laboratories for distribution to the subcommittee members, and that a standard size motorette be adopted to simplify evaluation of test results from various laboratories. The small motorette used in the U.S. was suggested.

Brief reports were presented by all Working Group chairmen at the meeting of Technical Committee 15. A proposal on Standard Methods of Test for Electrical Strength of Electrical Insulating Materials at Commercial Power Frequencies, issued by Working Group 1 in March, recommends methods for measuring the electrical breakdown of boards and sheets, strips and tapes, rigid tubes, flexible tubing and sleeving, molded materials, varnishes, liquids, and filling compounds. Comments were reviewed.

The procedure recommended in this proposal will be revised to include the established electrode systems used in the United States, United Kingdom, and Europe for the thicker materials. These electrodes include the 2-inch diameter cylinders specified in ASTM D-149, Methods of Test for Dielectric Breakdown Voltage and Dielectric Strength of Electrical Insulating Materials at Commercial Power Frequencies, the 1.5-inch and 3-inch diameter cylinders used in the United Kingdom, and the recessed spherical top electrode and plate bottom electrode in use on the Continent.

Dr A. H. Scott, National Bureau of Standards, is chairman of Working Group 2. A draft, Method of Test for the Determination of the Insulation Resistance of Solid Insulating Materials, circulated to members of Technical Committee 15 on recommendation of Working Group 2, is similar in many respects to ASTM D-257, Methods of Test for Electrical Resistance of Insulating Materials. A revised draft will be recirculated for approval by Technical Committee 15.

The problem of environmental conditioning is to be reviewed by Working Group 2.

The tracking test circulated to Technical Committee 15 by Working Group 3 consists of dropping an electrolyte between two electrodes. Failure is registered when electrical breakdowns occur between the energized electrodes. The Working Group recommended that a draft of the tracking procedure, revised according to recent suggestions, be recirculated under the two-month rule. This means that member nations have two months to make a choice between the original or revised procedures. Only editorial changes will be considered. Although there has been much discussion and criticism of this method, it was the consensus that the method will be useful for comparing materials.

Dr G. de Senarclens, Fabrique Suisse d'Isolants, Breitenbach, Switzerland, chairman of Working Group 5, reported that group tables for the Insulation Encyclopedia that is being prepared have been substantially completed. The first edition has been published in French by the Swiss National Committee. Through the efforts of K. N. Mathes, General Electric Company (USA), and T. W. Dakin, Westinghouse Electric Corporation, and the courtesy of General Electric and Westinghouse, English translations of these tables have been completed. The English version has not been published, however. These tables will provide a handy reference for preliminary selection of insulating materials. A detailed description of the materials, including chemical formulation, physical and electrical properties, and experience obtained in use will be given in monographs. The U.S. National Committee has agreed to take an active part in work to complete monographs describing the properties of insulating materials. A deadline of four years was set for their preparation.

Working Group 4, Voltage Endurance, will continue its study of methods for measuring voltage endurance and corona resistance, including methods proposed by the United States, United Kingdom, and France.

A proposed test method for measuring dielectric constant and loss, circulated to the members of Technical Committee 15 in April, 1958, by Working Group 6, Dielectric Constant and Losses, is similar to ASTM D-150, Methods of Test for A-C Capacitance, Dielectric Constant, and Loss Characteristics of Electrical Insulating Materials. The Working Group decided to make a number of changes and prepare a revised draft of the proposed test method.

Working Group 7, Temperature Properties of Insulating Materials, plans to prepare revised drafts of the proposed Test Procedure for the Evaluation of Thermal Stability of Enameled Magnet Wire by Loss of Electric Strength and the Guide for the Preparation of Test Procedures for the Thermal Evaluation of Electrical Insulating Materials. These documents are similar to AIEE Procedures No. 1D, Guide for the Preparation of Test Procedures for the Thermal Evaluation of Electrical Insulating Materials, and No. 57, Procedure for Evaluation of the Thermal Stability of Enameled Wire.

The Working Group also considered a test method for evaluating thermoplastic yield of insulating materials submitted by the United Kingdom that is similar to ASTM D-648, Method of Test for Heat Distortion Temperature of Plastics. These will be discussed further.

K. N. Mathes, the U. S. delegate, submitted a graph paper for charting thermal endurance data. If this graph paper is adopted as an international standard it will make it easier to compare thermal endurance data published in different nations, it was explained.

A proposal for a standard layout and format for Technical Committee 15 test procedures was reviewed, and definitions of terms relating to insulating materials submitted by Dr J. P. Bohnenblust, Brown Boveri and Company, Baden, Switzerland, were discussed. This latter proposal will help prevent misunderstanding in translating documents into the different languages.

At its final meeting, Technical Committee 15 set up a steering committee to meet at least once a year to guide the work of the committee. Members are all the Working Group chairmen and three members-at-large.

REPORTS FROM THREE IEC COMMITTEES

IEC WORK ON CABLES

Briefed from a report by Dr R. J. Wiseman, technical advisor to the U.S. National Committee for the work of IEC/TC 20, and chief delegate at the committee's 1958 meeting.

The meeting of IEC/TC 20, Cables, held in Copenhagen July 1 to 4, was attended by 42 delegates from 15 countries.

Four drafts of proposals for tests on internal and external gas pressure cables and accessories were considered. The secretary of the committee was requested to prepare a single draft for the internal pressure type cable, and at the same time, a specification for the external pressure type cable (which is known as "Compression Cable"). He was also requested to prepare and circulate a new draft of the oil-filled type paper cable specification.

On a suggestion that the committee consider preparing tables of current-carrying capacity of cables, the U.S. delegate described the project that the Insulated Power Cable Engineers' Association (IPCEA) and the Insulated Conductor Committee of the American Institute of Electrical Engineers have undertaken. When the computations have been completed, published copies will be given the committee.

It was decided to postpone preparation of specifications for testing of rubber and plastic cables until the paper cable specifications are finally completed and accepted.

Recommendations for Tests on Oil-filled, Paper-Insulated, Metallic Sheathed Cables and Accessories for Voltages up to 275 kv were approved, it was reported at the meeting.

Dr R. J. Wiseman, vice-president and chief engineer of the Okonite Company, and J. H. Foote, president of the Commonwealth Associates, Inc, were U.S. delegates, with Dr Wiseman acting as chief delegate.

1st INTERNATIONAL MEETING ON SEMI-CONDUCTOR DEVICES

As reported by Virgil M. Graham, associate director, Electronic Industries Association, and chairman of IEC Subcommittee 39-2, Semi-Conductor Devices.

IEC Subcommittee 39-2 on Semi-Conductor Devices held its initial meeting in Vasteras, Sweden, June 30 and July 1 and 2. A total of 34 were present, representing France, Germany, Italy, Netherlands, Sweden, United Kingdom, USA, Yugoslavia, and the People's Republic of China. The USA was represented by six delegates in addition to V. M. Graham, who served as chairman. R. A. York of General Electric Company was chief U.S. delegate.

The agenda was so large that it was decided to operate in Working Groups on:

(1) Definitions and Terms
(2) Letter Symbols
(3) Essential Ratings and Characteristics
(4) Methods of Testing

The reports of the Working Groups were considered by the subcommittees and action was taken on several detailed items among which was adoption, with the approval of all delegations, of 25 C as a standard reference temperature for all semi-conductor devices.

A program of future work based primarily on the areas of the four Working Groups was established, with mechanical standardization and rating systems also to be considered.

U. S. WORK USED BY IEC COMMITTEE

Based on a report by F. E. Reiber, sales manager, Switchgear Distribution Apparatus Department, Westinghouse Electric Corporation, East Pittsburgh, Pa., who represented the United States National Committee at the meeting of IEC/TC 33 last March in Paris, France.

Forty-four delegates representing 12 countries attended a meeting of IEC Technical Committee 33, Capacitors for Power Systems, in Paris, France, March 25-27.

The committee discussed in detail proposed revisions of IEC Publication 70, Specification for Capacitors for Power Systems. The proposal was referred back to the Working Group for review. The committee also considered a proposal for future work on energy storage capacitors. This proposal has been endorsed by the Secretariat.

A proposal on series capacitors for power systems is now in the fourth draft. Three methods of ionization measurement were discussed, two of which were based on use of thermocouples. Methods of testing thermal stability were also under discussion, as was the possibility of rating series capacitors in amperes and ohms instead of voltages. When a new draft has been prepared incorporating the changes agreed upon at the meeting, the proposal will be circulated to the IEC members under the six months rule.

The committee is encouraging all possible cooperation with the International Conference on Large Electrical Systems (CIGRE).

It was proposed that the 1959 meeting of the committee be held during July in Madrid.

standards | A MANAGEMENT RESOURCE FOR DIFFICULT TIMES

by **Leo B. Moore**

Under economic conditions such as we are presently experiencing is there special value in a company's standards program? Would it prove beneficial for management to turn to its standards people? And could the standards group make a noteworthy contribution in this particular hour of need?

Both standards and management people, in my opinion, should proceed without delay to harness standards abilities to meet the challenge of the times.

Depression or recession?

The question of what word best characterizes the existing economic situation seems to be a matter of point of view. If *you* are having trouble, then it's a recession; if *I* am having trouble, it's a depression.

An important point about this period is the fact that the present business condition has been to a large extent consumer-imposed. Consumers generally have more money today than they have ever had, but in certain areas they are simply unwilling to buy. It is almost as if they were surfeited with their past purchases and have no more urge to spend, even for some of those things which they admittedly need.

This generalization is too broad, of course, to explain specific cases. It is mentioned here to support a conclusion that this condition is definitely temporary, although of uncertain duration and of varying impact.

For management, this means that we are tightening our belts rather than following the usual line and disposing of staff and service functions when times get difficult. For standards people, this means that we are presented with the challenge and with the opportunity that come out of every difficulty. The present situation portends nothing but good for standards if the challenge is accepted.

Standards—an answer to need?

Perhaps we do not envision standards as an activity which can arise to meet a broad challenge. Many standards engineers, and their managers also, have a stereotyped notion of what standards activity is. To them, the concept of its fire-fighting ability may seem far fetched. If this is so, then it may be important to note that the standards department of the average company was an outgrowth and a direct consequence of a situation and a problem that only standards could answer. I know of countless companies with standards programs which were started because management had a problem. One company hard hit financially was able through standardization to reduce its inventory investment enough to see the situation through. Another company having trouble servicing its customers used standards to streamline its installation and maintenance operations. Another company found standards an answer to its branch plant problems. I have yet to find a company that instituted a program of standards because it was a principle of management. Always it has been embraced because it furnished the desired answer to a pressing need.

Standards—the necessary potential?

The fact that standards endeavors have been born out of adversity rather than of virtue has, in my opinion, placed them under a hurtful sign. Typically, standards activity has furnished the needed answer; then managers and standards people both have neglected to find other ways in which these standards ideas might be used. Thus we find standards groups located variously in company organizational structures and continuing essentially the same tasks that had been originally assigned.

This picture, admittedly over-simplified, gives reason for the feeling that standards can and should be of material aid to management now. The job before us is to widen the horizon of standards groups and to expand their activity. This means not only doing more of what they are now doing, but doing those additional things which they are equipped and suited to do.

To reach this end, both managers and standards people must strive for an understanding of the fundamentals and the potential of standards.

Do managers understand standards?

The managers whom I meet have usually only a vague notion of what standards in their company mean. All of them have a clear idea that they cannot manage without standards. Standards are the basis for scientific management and for all of its thinking and procedures. After an explanation along this line, managers invariably point out that this concept is different from what they

believe their standards groups are doing. This evidence suggests what first must be done by both managers and standards people.

Let us first understand the fundamentals of standardization. Let us agree on what we in our company mean by standards, what we intend standards to do, and the ways in which standards activity contributes to management.

Here, I am saying that management and standards men should take counsel and redefine the extent, the value, and the application of standards thinking in the company picture. The job for the standards people is to prepare for such a meeting by understanding better the manager's role and realizing that a standards man knows as much about certain phases of management as the manager does.

There may be some question in the minds of standards engineers about this knowledge of management, but if similarity of concerns and actions is any criterion then they certainly should understand management. For a long time my chief interest has rested in management generally and I have asked many managers what they do. No definite or finite list is yet available but typically managers will specify the following: planning, organizing, staffing, directing, controlling, including coordinating. A shorter answer might be: risk-taking and decision-making.

The more I see of these lists the more I am convinced that the same answers might be given by standards people, meaning that standards men do the same things that managers do. Pursuing the notion further, you will find that they do these things in the same way that managers do—by working with and solving problems through people. Standards engineers think and act a lot like managers, experience the same frustrations, and are faced with the same difficulties. Although they are called engineers, they as a group mix engineering and economic ideas in their day-to-day work just as managers do.

Managers, in the final analysis, find themselves in the middle of the conflicting demands of the consumer, the employee, and the investor, and are managers because they are able to satisfy these demands at the same time to everyone's satisfaction. In like manner, the standards man is in the midst of the demands of marketing, engineering, and production, and strives to satisfy and alleviate the forces of diversification and specialization while making sound economic decisions.

What is the existing value of standards?

Being realistic, I would anticipate that any manager before he would be willing to consider newer aspects for standards would inquire about the value of the present work. By this he may mean money, and if dollar figures are available for specific projects then they should be made known. However, I would suspect that the manager would appreciate some words that indicate worth in the sense of principle, rather than return. This means that the standards man must go below the surface of things and identify value in broad sweeps of the brush. For example, there is a fundamental worth in standardization in the area of communication and understanding which is of great present concern to managers. Standards implement these values specifically in purchase specifications, drafting practices, production procedures, and a host of others. Company standards often put to work in terms of company needs the industry-wide standards developed by associations and technical societies and the nationwide standards developed under the procedures of the American Standards Association. By adapting these broad-gage standards, the company maintains its operations on an easier communication and better understanding level with its customers and suppliers, as well as in its own plant and among its own employees.

As another example, standards reduce costs through simplification of items, publication of ready reference standard data, and other activities. It is for the standards group to identify in the things they do the very efforts which the manager now believes he should emphasize in order to meet the challenge of the times.

Can standards widen the horizon?

Through this emphasis standards will be started on the right road with managerial support and backing. Without this support, the standards group can do nothing to extend its own endeavors. The acceptance of standardization by management as a worthwhile activity or as something desirable is not enough. The effort should be in the direction of an organized, cooperative standards program throughout the whole company; otherwise, management loses what potentially could be its greatest asset in the systematic advance of the standards movement throughout the enterprise. It is for the standards groups to present this attitude to management through simple recognition of the fact that it is its primary task to help the manager make better decisions, now and in the future. This is everyone's job, but it is often forgotten in the urgency of the day's business or the anxiety for the future.

What is the best procedure?

Starting with this attitude, that our responsibilities were given to us by the manager to share his total burden with him, we are properly prepared to demonstrate a broader outlook and understanding of the total management picture. The manager thinks in terms of plans, objectives, and goals, and so should we.

Our primary objective is to extend the standards notion throughout the company. From this should flow some specific secondary objectives.

These objectives can be broken down into goals which are short-run in nature and might be identified as projects. They will include some of those now on our list but never touched.

These projects should be given a preliminary evaluation in order to form the basis of selection on merit, and continuous appraisal.

With these efforts carried through, let the manager lay the plans to implement our aim of joint standards

effort in many areas. When he sets the tasks, reviews accomplishment, and provides coordination, we will be well on the way toward a dynamic *company* program, receiving his help in the human relations problems that will arise, and gaining his sponsorship for standards as a basic principle of management. We will be riding out this economic weather—all of us together.

What are the possibilities?

Since we are all in this together, I would suggest that the start of the search for possibilities should include turning to everyone for their ideas. If we are able to state clearly the fundamental ideas and aims of standards, others should be able to select opportunity for application. Their participation will go a long way toward eliminating future problems due to the natural reaction of people toward the intrusion of others in their bailiwick. In order to start the creativity rolling, it might be well for standards people to have a list of possibilities as examples. You will want to make your own list, but as a starter here are a few ideas:

Paperwork

The cost of paperwork in every business has increased tremendously. Could we use standards for paper, notebooks, office supplies, etc? Perhaps a joint effort with industrial engineering might uncover some needed standard procedures and practices.

Manufacturing supplies

Standards are diligently applied to production materials. Companies spend a lot of money in overhead items to which few people pay much attention.

Drafting practices

Is this the time to make that push for standard drafting practices? and for more simplified drafting?

Engineering manpower

We may be temporarily off the hook in the area of the number of engineers needed by the company, but this may be the time to eliminate the duplicated engineering that is taking place. Perhaps we need a slogan —let's stop reinventing the wheel.

Value engineering

As a creative tool, the standards group might find it worthwhile to adopt the notions of value analysis and to school the engineering groups in its use.

Training

Do our engineers have as full a picture of standards as they need? This question applies particularly to the newer engineers who have been hired in order that the company will have enough engineering help. If standards is an over-riding philosophy, then more people should be trained in its basic elements.

American Standards

Is this the time to make sure the company is taking advantage of the thinking and work that have developed nationally agreed-upon American Standards for tools, materials, safe practices, drafting, and many production methods? The designation "American Standard" given to a standard by ASA, no matter how and by whom developed, takes guesswork out of the question, "What standard should be adopted as the company standard?"

Product

Although diversification of the product line might be a management plan for the future, it may well be sensible to consider the consumers' present mood. One large American company defied the practice of making locomotives to order and decided to make a standard model that more adequately met the railroads' real needs. This use of standardization put the company in the locomotive business.

What are the chances?

Frankly, the chances that a standards group can successfully step up to the challenge of the moment are completely dependent upon the success the group has in enlisting not just the benediction of the manager but his full interest and concern. Today, standards men are taking advantage of a situation in meeting this challenge, when they should already be tooled and working in this direction, whether times be good or bad. The efforts considered here are worthy of continuous and studious application.

To meet the challenge calls for elimination of the negative attitude that standards are prosaic, workaday, unspectacular, and substitution of the positive attitude that standards have a real job to do.

This is the ultimate destiny for standards. It is as much management's responsibility as it is that of engineering. In fact, standards ideas are universal.

ABOUT THE AUTHOR

Leo B. Moore (right) after receiving this year's award for "outstanding contributions to the literature of standards" is congratulated by Russell P. Mahan, ASTM (left), and Madhu S. Gokhale, past-president of SES (center). The award was given by the Standards Engineers Society and the American Society for Testing Materials.

Standardization—What's In It for Me?

NINTH NATIONAL CONFERENCE ON STANDARDS

Hotel Roosevelt, New York, November 18, 19, 20, 1958

THE National Conference on Standards returns to New York this year. With an eye to the problems that face everyone concerned with standards today, the theme of the Conference will be "Standardization—What's In It For Me?"

The Fortieth Annual Meeting of the American Standards Association opens the Conference at 10:00 A.M. Tuesday, November 18. Following a joint meeting of the ASA Board of Directors and Standards Council, ASA member representatives, and guests, ASA president, H. Thomas Hallowell, Jr, president of the Standard Pressed Steel Company, Jenkintown, Pennsylvania, will set the pace for the following sessions.

The technical sessions will open with a program on Materials—The Foundation for Standardization, sponsored by the American Society for Testing Materials. Professor Kenneth Woods, president of the American Society for Testing Materials, will keynote this session which will feature discussions on standards in the area of forgings and castings, nonferrous metals, and plastics. I. V. Williams, metallurgist, Bell Telephone Laboratories, Murray Hill, N. J., and Ray Frye, manager of materials and standards, Westinghouse Electric Corporation, East Pittsburgh, Pennsylvania, are scheduled to speak on nonferrous metals. Paul Archibald, chief metallurgist, Standard Steel Works Division, Baldwin - Lima-Hamilton, will speak on forgings and castings, and Howard Adams, Monsanto Chemical Company, St Louis, Missouri, on plastics.

The significance of International Standardization to U. S. Industry will be the subject of Session 3, Wednesday morning, November 19. Problems of exporting companies, electrical companies, machine tool builders, the textile industry, and the plastics industry will be taken up, as well as the views of a number of prominent representatives of organizations overseas.

Concurrent with the international session will be one sponsored jointly by the Company Member Conference and the National Association of Purchasing Agents, with the theme "Here's How Standards Make Money for Me." Five-minute presentations by industry representatives will cite experiences with use of standards and how they have been helpful—pointing particularly to cooperation between standards and purchasing people. William H. Old, director of purchasing, The Babcock and Wilcox Company, will be chairman.

The Standards Medal and the Howard Coonley Medal will be presented at the Annual Award Luncheon, Wednesday noon, November 19.

Industry's responsibility in developing its own nuclear codes and in providing world leadership in the nuclear standards field will be taken up at Session 5, Wednesday afternoon, November 19. The session will be sponsored by the Atomic Industrial Forum. Alfred Iddles, chairman of the Atomic Industrial Forum, and president of The Babcock and Wilcox Company, New York, will be chairman.

Speakers will discuss the subject from the government viewpoint and the viewpoint of industry. There will be reports on international aspects, and on what the six committees working under the supervision of ASA's Nuclear Standards Board are accomplishing.

The Company Member Conference and the National Machine Tool Builders' Association will sponsor Session 6, which will continue the discussion of specific use of standards in companies.

Producer-Consumer Benefits of Standardization, the subject of Session 7, will give an opportunity for discussion of standards in the textile field, centering around the way American Standards L22 are being put to use. Dr George S. Wham, Jr, director of the Textile Laboratory of Good Housekeeping Institute, New York, will be chairman. Speakers will include such prominent individuals in this field as William Burston, manager, Merchandising Division, National Retail Merchants Association; Arthur R. Wachter, manager, Converting Relations Department, American Viscose Corporation; Ben Oshins of Ben Oshins, Inc, New York; Percy R. Meeker, vice-president, Reeves Brothers, New York; Leonard Kalish, Triplex National

Corporation, New York; and Dr Pauline Beery Mack, dean of the College for Household Arts and Sciences, Texas State College for Women, and consultant to the American Viscose Corporation.

The problem of standards for safety labels on containers for hazardous substances will be taken up in Session 8. This session, to be sponsored by the Manufacturing Chemists' Association, the American Petroleum Institute, and the National Paint Varnish and Lacquer Association, will take up the principles and the legal aspects of precautionary labeling, as well as the problems involved.

Session 9 on Producer-Consumer Benefits from Standards for Electronic Components will be sponsored by the Electronic Industries Association. Leon Podolsky, technical assistant to the president, Sprague Electric Company, North Adams, Massachusetts, will be chairman. Among the speakers will be such well-known personalities as Vincent de P. Goubeau, vice-president in charge of materials, Radio Corporation of America, Camden, N. J.; Julian K. Sprague, president, Sprague Electric Company, North Adams, Mass.; and Marquis A. Acheson, Sylvania Electric Products, Inc, Kew Gardens, N. Y.

Printed circuit and etched wiring standardization will also be discussed at this session by Dr Joseph Harrington, Arthur B. Little Company, Cambridge, Mass. Industry-military cooperation in the development of standards and how they benefit the taxpayer will be presented by Captain Henry Bernstein, military engineering coordinator, Electronic Industries Association, Washington, D. C., and George Hull, assistant to the Assistant Secretary of Defense (Supply and Logistics), Washington, D. C.

Plans are going forward for a session on photography, both national and international. Details will be announced later.

For further information write: American Standard Association, 70 East 45 Street, New York 17, N. Y.

STANDARDS RECEIVED FROM OTHER COUNTRIES

546 INORGANIC CHEMISTRY

France (AFNOR)

Determination of volumetric contents of iron pyrite ashes NF T 14-008

India (ISI)

Water for storage batteries	IS 1069
Distilled water	IS 1070
Sodium thiosulfate	IS 246
Anhydrous sodium sulfite	IS 247

Mexico (DGN)

Ammonium sulphate DGN K 48-1956

Poland

Chlorosulfonic acid PN 57/C-84118

621.3 ELECTRICAL ENGINEERING

Bulgaria

Low-frequency amplifiers BDS 1509-57
Overhead line stretcher clamp BDS 2404-56
Cables, rubber insulated, lead sheathed BDS 2581-56
Electric boilers, household BDS 2605-56
Lamp holder, bayonet type BDS 2623-56
High voltage circuit breakers BDS 2679-57
Flashlight, pocket type BDS 2653-56

Canada (CSA)

Construction and test of insulated conductors for power-operated radio devices C22.2 No. 16-1958
Construction and test of electrically heated bedding C22.2 No. 101-1958
Construction and test of coil-lead wires C22.2 No. 116-1958
Specification and test code for instrument transformers C13-1958

Czechoslovakia (CSN)

5 stds for h.t. terminals of ignition distributors CSN 30 4540/4
2 stds for electric rotating machines, general survey of manufactured types CSN 35 0001/2
Sectional circuit breakers, high tension CSN 35 4212
Receptacle and plugs up to 100 amp, 500 v, explosion-proof type CSN 35 4523
8 stds for paper insulated steel conduits for electric wires CSN 37 0021/7
13 stds for details of stuffing boxes for electric cables and wires CSN series 37 01
5 stds for different servo-motors CSN 36 3830/4
5 stds for different sizes of lead-acid storage batteries 6 and 12 v CSN 36 4310/4
Power cables, thermoplastic insulated CSN 34 7667
Receptacles and plugs, waterproof, 25 and 60 amps, 380 and 500 v CSN 35 4519
Receptacles and plugs up to 100 amp, 500 v, explosion-proof type CSN 35 4523
Switch boxes for high voltage up to 35 kv, diagram for different types CSN 35 7181
Power capacitors for working frequencies from 100 to 20000 hz CSN 35 8211
Electric water boilers CSN 36 1470

France (AFNOR)

Electro-technical vocabulary: group 05—Basic definitions NF C 01-005
Electro-technical vocabulary: group 07—Electronics NF C 01-007
Electro-technical vocabulary: group 12—Magnetic transductors NF C 01-012
Electro-technical vocabulary: group 16—Protective relays NF C 01-016
Electro-technical vocabulary: group 20—Scientific and industrial measuring instruments NF C 01-020
Electro-technical vocabulary: group 31—Signalization and all electric safety devices for railroads NF C 01-031
Kitchen apparatus: heating covers NF C 73-147

Germany (DNA)

Range of frequencies and waves, denomination and use DIN 40015

621.86/87 MECHANICAL HANDLING AND HOISTING EQUIPMENT

Austria (ONA)

Overhead rope railway for material transport, manufacturing rules of ÖNORM V 4001

France (AFNOR)

2 stds for electric elevators and hoists NF P 82-201,-204

Netherlands (HCNN)

3 stds for armsignals for hoisting NEN 1984/6
2 stds for medium weight and light roller conveyors for semi-permanent installation NEN 2162/3
Roller conveyors for loading and unloading NEN 2164

Spain (IRATRA)

5 stds for conveyor belts of woven fabric and rubber UNE 18032, 18052/3, 18056/7

United Kingdom (BSI)

Higher tensile steel chain slings BS 2902:1957
Higher tensile steel hooks BS 2903:1957

news briefs .....

● The largest annual meeting in the history of the American Society for Testing Materials was held at Boston, June 22-27 this year. A total of 2988 attended the meetings, which included 42 technical sessions and more than 800 technical committee meetings.

Among highlights of the technical program were symposiums on materials research frontiers, radiation effect on materials (third of a series), bulk sampling, and particle size measurement.

Fifty-seven main technical committees, joint committees with other societies, and ASA sectional committees sponsored by ASTM met during the annual meeting. Subcommittee meetings and special task group meetings brought the total to about 800.

Elmer W. Pehrson, chief of the division of foreign activities of the U.S. Bureau of Mines, delivered the annual Marburg Lecture, established by the Society to honor its first secretary. Mr Pehrson spoke on "Man and Raw Materials."

The Gillett Memorial Lecture, sponsored jointly by ASTM and Battelle Memorial Institute to honor the first director of Battelle, was presented by Dr Clyde Williams, former president of Battelle Memorial Institute and now president of Clyde Williams and Company. His subject was "High-Temperature Metals—Their Role in the Technological Future."

Among the Society's special guests at the President's Luncheon were T. E. Veltfort, chairman of ASA's Standards Council; A. S. Johnson, past chairman of the Council; and Cyril Ainsworth, deputy managing director of ASA.

A number of ASTM members who have been active in ASA were among those honored during the meeting. Awards of Merit were presented to:

Theodore Irving Coe, technical secretary, American Institute of Architects, in recognition of long-time, faithful service and leadership in varied technical committee work.

Vincent P. Weaver, assistant metallurgist, The American Brass Company, Waterbury, Conn, in recognition of outstanding administrative and technical competence as secretary of Committee B-5 on Copper and Copper Alloys for 12 years. In that capacity Mr Weaver was a member of the advisory group to the American Standards Association in administering the secretariat of ISO/TC 26 on Copper and Copper Alloys and represented the U.S. at the first meeting of TC 26 in Stockholm in 1955.

James B. Rather, Jr, assistant manager of the technical service laboratory, Socony Mobil Oil Company, who has been active in ASTM Committee D-2 on Petroleum Products and Lubricants, and has served on the ASTM Administrative Committee on Standards.

Arnold H. Scott, physicist, National Bureau of Standards, an active member of ASTM Committee D-9 on Electrical Insulating Materials, and chairman for six years. Mr Scott is currently chairman of Subcommittee V on Ceramic Products. He has been chairman of ASA Sectional Committee C59 on Electrical Insulating Materials since 1949, and is technical advisor to the United States National Committee of the International Electrotechnical Commission on work of IEC/TC 15.

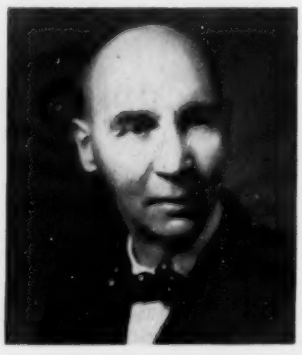
ASTM also honored James G. Morrow, metallurgical engineer, Steel Company of Canada, and a past-chairman of the Canadian Standards Association. Mr Morrow was presented with a certificate of his election to Honorary Membership in ASTM. Mr Morrow has been active continuously in ASTM since 1911. He is at present a member of Committees A-1 on Steel, E-4 on Metallography, B-1 on Wires for Electrical Conductors, and A-3 on Cast Iron. During World War II he was known for development of "Morrow" steel and was technical advisor to the Government Steel Controllers. He has been active in development of iron ore mining in Canada and was largely responsible for organization of the Canadian Ordnance Association, later the Canadian Industrial Preparedness Association, of which he is now president. In 1955 he was awarded the Standards Medal by the American Standards Association.

Officers of the Society for the coming year are: Professor K. B. Woods, head of the School of Civil Engineering, and director of the Joint Highway Research Project, Purdue University, *president;* A. Allan Bates, vice-president of research and development, Portland Cement Association, *vice-president;* Frank L. LaQue, vice-president and manager, Development and Research Division, The International Nickel Company, Inc, *vice-president.*

ASTM has scheduled its 1959 Committee Week to be held at the Penn-Sheraton Hotel, Pittsburgh, Pa., February 2-6, and its 62nd Annual Meeting at the Chalfonte-Haddon Hall, Atlantic City, N. J., June 21-26, 1959. The Third Pacific Area National Meeting will be held at the Sheraton-Palace Hotel, San Francisco, California, October 11-16, 1959.

● The Paul G. Agnew Fund, a memorial to the American Standards Association's first permanent secretary, is being set up at Johns Hopkins University for the benefit of graduate students in the Department of Physics. A deed of trust to create the Fund was presented to the University by Mrs Agnew.

Dr Agnew was secretary of the American Engineering Standards Committee and its successor organization, the American Standards Association, from 1919 through 1947. He came to AESC from the National Bureau of Standards. While working at the Bureau as assistant physicist, he had spent his off-work time at Johns Hopkins University where he received the degree of Doctor of Philosophy in 1911. His dissertation for his doctorate, "A Study of the Current Transformer with Particular Reference to Iron Loss," was published as reprint bulletin No. 3 by the National Bureau of Standards.



Paul G. Agnew

In acknowledging the gift, Dr Milton S. Eisenhower, president of the University, said: "By your generosity, you are creating an important and valuable tradition at the University as well as a meaningful, lasting memorial to Doctor Agnew. Generations of deserving students will advance their careers as a result of your action. Needless to say, many of them, as they become scientists, will be grateful to you and will receive inspiration from the knowledge of Doctor Agnew's own contributions to his chosen field."

● Scientific and technological advances during the past 13 years have been incorporated in an extensive revision of the American Standard Specifications for Photographic Films for Permanent Records, just published by the American Standards Association. The revised version, designated PH1.28-1957, replaces American Standard Z38.3.2-1945.

The standard is concerned with the raw stock for permanent record film as well as with the processed film that is used for storage. The standard applies to microfilms, motion-picture films, roll films, and sheet films of the safety-cellulose ester type having gelatine-silver halo emulsions developed in ordinary processing solutions to produce a so-called black-and-white photographic image.

The principal changes made in the revised version are as follows: (1) substitution of the MIT Fold Test for the Pfund Test because of availability and convenience of the instruments; (2) new flexibility limits to cover films of various thicknesses; (3) omission of the pH test, which is not applicable to cellulose triacetate; (4) revision of the viscosity test to cover cellulose triacetate; (5) revision of the limits for residual thiosulfate for films of different grain sizes and for films with coatings on both sides of the base; and (6) specification of the image to be selected for thiosulfate analysis and restriction of the time in which the analysis may be performed.

The original American Standard was based on requirements of the National Bureau of Standards for record films used by the United States Government for copying permanent original records. The destruction of certain original Government records after they had been copied on record film was authorized by a Congressional bill in 1940.

Since that time, great advances have been made in the use of photographic films for the preservation of records, it is pointed out in the foreword to American Standard PH1.28. Considerable interest is also being shown in the safekeeping of pictorial records having legal, scientific, industrial, or historical value. The preservation of film records by national, state, and municipal governments throughout the country, and by banks, insurance companies, and other enterprises was stimulated by a recognition of the economies that result from the use of film records through reduction of storage space, better organization and accessibility, and ease of reproduction.

American Standard PH1.28-1957 is the result of the cooperative efforts of 18 organizations, including photographic manufacturers, several Government departments, professional organizations, and others concerned with the use and safety of record films. Copies may be obtained at 50 cents each.

● Errol W. Doebler, chairman of the board and chief executive officer of the Long Island Lighting Company, has been named by the Electric Light and Power Group as a member of the Board of Directors of the American Standards Association. Mr Doebler will serve until December 31, 1959. Mr Doebler succeeds Mr Harold Turner, vice-president in charge of operations, American Gas and Electric Service Corp., who resigned.

Errol W. Doebler

Mr Doebler's interest in the development of atomic power for peaceful uses is credited with bringing the Long Island Lighting Company actively into this program. He is a director and a member of the Executive Committee of Atomic Power Development Associates, a non-profit atomic power research organization consisting of more than 30 companies from the electrical industry, and is a trustee and vice-president of Power Reactor Development Company. This company was organized to provide a full-scale research and developmental atomic plant and to construct and operate an atomic reactor for the generation of electricity. Mr Doebler is a member of the organization's Executive Committee.

Among the organizations in which he has a special interest are the Nassau Hospital Association, the Long Island Fund of Industry, Labor, and Commerce for Hospitals, Health and Welfare, the Utilities Mutual Insurance Company, and the Associated Hospital Service of New York. He is also a member of the General Division Executive Committee of Edison Electric Institute and represents the Institute on the governing body of the National Industrial Conference Board.

Mr Doebler is a member of the American Society of Civil Engineers, Society of Gas Lighting, American Gas Association, The Economic Club of New York, and the Long Island Association.

● Anyone referring to the State of Rhode Island's safety code for abrasive wheels will find that it consists of the complete American Standard Safety Code for the Use, Care, and Protection of Abrasive Wheels, B7.1-1956. The only change is addition of a special cover and the text of the Act creating the Industrial Code Commission and giving it authority to adopt and issue industrial safety and health codes.

Frank W. Marcaccio, chief of the Division of Industrial Inspection, and a member of Sectional Committee B7, representing the Industrial Association of Government Labor Officials, reports that the state adopted American Standard B7.1-1956 in its entirety early this year as the latest revision of Rhode Island Industrial Safety Code No. 1.

This is the thirteenth installment in the current series of rulings as to whether unusual industrial injury cases are to be counted as "work injuries" under the provisions of American Standard Method of Recording and Measuring Work-Injury Experience, Z16.1-1954. The numbers in parentheses refer to those paragraphs in the standard to which the cases most closely apply. These cases are issued periodically by the Z16 Committee on Interpretations.

Case numbers in the current series start with 400. Cases 400-500 have been reprinted with an index prepared by the National Safety Council. To make it easy to locate all cases applying to any section of the standard, the index is arranged both numerically by paragraph number of the standard and numerically by case number. Each index reference includes a brief description of the case. Reprints are 75 cents per copy, available from ASA.

Sectional Committee Z16 is sponsored by the National Safety Council and the Accident Prevention Department of the Association of Casualty and Surety Companies.

Are These Cases Work Injuries?

CASE 558 (5.2)

An appliance serviceman normally carried with him a tool box weighing approximately 25 pounds. After servicing an electric range, he stooped over to lift his tool box, and he felt something "pop in his back."

The employee did not slip, trip, or do anything other than his normal work procedures in fulfilling his duties. The doctor diagnosed the injury as a lumbosacral strain.

Decision: This injury should not be included in the work injury rates. The committee concluded that the employee was apparently not lifting anything at the time his back popped, and that under these circumstances the case did not meet the requirements of part (a) of paragraph 5.2.

CASE 559 (1.6)

An employee had gone to the washroom to smoke, which he ordinarily did several times during the course of his day's work. As he attempted to light the cigarette with a large sulphur-tipped match, the tip of the match flew up and burned one of his eyes which necessitated sending the employee to the doctor.

Decision: This injury should not be included in the work injury rates. The committee concluded that this injury did not arise out of employment. The members believed that if the tip of the match had landed in a fellow employee's eye, it probably should be counted in the basis that the injury arose out of the environment of employment.

CASE 560 (5.2)

A maintenance department employee, while making a routine inspection of one of the company's outlying pipelines, raised his foot to kick at the pipeline. He somehow twisted his back, causing an acute back strain. There was no purpose for his kicking at the line, but it might have been a sort of psychological compulsion. There was no previous history of a back injury.

Decision: This injury should be included in the work injury rates. The committee concluded that kicking the pipelines was a definite incident, and the back strain apparently arose out of this incident.

CASE 561 (4.6.1)

A mechanic had trouble with his right hand in February. In March the company doctor diagnosed the condition as Dupuytren's contracture, resulting from the use of heavy tools, and recommended that the employee avoid excessive impact and strain to his hand.

The mechanic lost no time from work, continued at his regular job, and did not again report the condition until October, two and one-half years later. After consultation with the company doctor and a consultant plastic surgeon, the employee was advised to have surgery. He continued his regular work until November when the operation was successfully performed.

The company wanted a decision on establishing the date of injury.

Decision: The committee believed that if the employee had had no further exposure or aggravation after his first visit to the company doctor, then this accident would go back to the date of that visit in March. However, the members believed that the employee did receive aggravation between his first reporting in March and second reporting in October, two and one-half years later. They, therefore, decided that the date of injury should be in October on the basis of the aforementioned aggravation.

CASE 562 (5.15)

As a result of a boiler explosion, an operator received first, second, and third degree burns. After the explosion, the injured walked under his own power to the first-aid room where he received first-aid treatment before being taken by ambulance to the hospital where the wound was cleaned and bandaged. The employee was admitted to the hospital where he remained for observation for two nights and one day, a total of 40 hours.

The injured reported to work on the first day of his shift's next regular schedule and on the succeeding four days. That night the wound gave him considerable irritation, whereupon he removed the bandage and spent the night with the wound open to the air. When he awoke the next morning he suffered extreme pain, and did not report to work that day.

The company doctor believed this latter pain was brought about due to the wound's being open to the atmosphere. He also believed that had he, rather than

the hospital doctor, treated the burns originally, the necessity of the injured removing the bandages would not have presented itself. The company wondered whether this case came under the provisions of Hospitalization for Observation.

Decision: The committee decided that this injury should be included in the work injury rates on the basis that this employee lost one full day from work. The members also believed that in order for paragraph 5.13 on Hospitalization for Observation to apply, the doctor must state that the employee could have continued working without any loss of time, and hospitalization was for observation only.

Case 563 [A1.6 (a)]

An employee was riding to work in a public bus when he experienced an injury resulting from a foreign body being blown into his eye. At the time of the injury the bus was on that part of its regular route which went through a plant of the company, but not the plant where this employee worked. The company questioned whether they should include this injury in their work injury rates since the bus was traveling through company property, but not that part of the company property where the employee's normal work area was located.

Decision: The committee decided that this injury should not be included in the rates. The members believed that the injury was simply that of a member of the public riding a public conveyance, and he had not yet reached the premises at which he was employed.

Case 564 [A1.6 (a)]

A company operated within a large area, including work area and residential section, the latter of which was semi-public, accessible to all persons. The company questioned as to whether injuries occurring during the course of travel to and from the work area should be considered work injuries, whether or not the employee lived within the residential area.

Decision: The committee decided that transportation injuries occurring within the broad project area should not be considered work injuries and should not be included in the rates. Although the company would be responsible for injuries occurring in the actual work area, the members did not believe the company should have to take the responsibility for the whole project area. The injury occurred while "going to and from a regular place of work," and did not arise out of and in the course of employment.

Case 565

No decision rendered. Not to be used as a precedent.

Case 566

No decision rendered. Not to be used as a precedent.

Case 567 [A1.6 (d)]

An employee traveled on company business to an outlying town. During his stay in that area a new company installation was inaugurated. The employee left the regional company office and went to his hotel in order to bathe and change prior to attending the inauguration ceremony. His attendance at this function was not a company requirement, but was in the interests of the company. While taking a shower bath at the hotel he slipped on the smooth and inclined tiling of the bath and fell, suffering a back injury.

Decision: The committee concluded that this injury should be considered as arising out of employment, and included in the work injury rates on the basis that bathing was to be expected of the employee before attending the inauguration ceremonies.

Case 568 (5.15)

An employee sustained a minor laceration on one of his fingers, and was treated at the first-aid room immediately thereafter. A week later he left for a week's vacation. When he was scheduled to return to work he reported inability to return because of a cold. The following day he went to his own physician for treatment of the cold, and at this time his physician discovered a swelling in the right armpit. The following day the company doctor confirmed the diagnosis that the infection was due to the laceration on the finger. The infection resulted in loss of time from work.

Decision: The committee concluded that this should be considered a work injury and included in the rates in accordance with paragraph 5.15 of the standard.

Case 569 (5.2)

An employee jumped approximately five feet from the top of a cell to the ground when a jumper buggy switch caught fire. He was checked by a doctor for possible fracture of his right foot; no fracture was found and no time was lost from work. About a month later the employee was off from work because of pleurisy in his left chest which was treated by his own doctor. A week later the employee bent down to lift a hoisting beam, and complained of something going bad in his back. The foreman, who was right there, stated later that the employee had complained of the pain as he was bending down to get hold of the beam, and not when he started to lift it. About three months later the employee's back started to act up again. Subsequently he was hospitalized, seen by several doctors, and advised to wear a brace which ultimately gave him trouble. The employee was on and off from work for several months, and the company questioned as to whether it should include the time lost from work in its work injury rates.

Decision: The committee concluded that this case should not be included in the rates on the basis that it did not meet the requirements of paragraph 5.2, in that there was no clear record of an accident or incident.

Case 570 [A1.6 (h)]

One-half hour before her starting time, an employee was going to the cafeteria (located within the plant) for the purpose of eating breakfast. The company did not allow personnel to clock in more than 15 minutes before their regular starting time. The employee "turned" her ankle, fell to the floor which was of smooth, dry concrete, and injured her wrist and ankle. She was taken to the hospital for emergency treatment, and lost time from work.

Decision: The committee believed that this injury should be included in the work injury rates. The members believed that Example 3 of paragraph A1.6 (h) applied since the employee had entered the company premises for the work day.

Case 571 [A1.6 (f)]

From time to time accidents occurred to employees on their way to work or on their way home in areas which were outside the plant gates but actually on property owned by the company. These areas were accessible to the public, some of them park-like in character, and it was believed that this situation involved even less control of the employees than was present in a company-owned parking lot which is specifically excluded under the rules. The company wanted to know whether "entrance to plant property" meant the plant gate or formal entrance, or whether it referred to legal ownership of property.

Decision: The committee concluded that such injuries should not be included in the rates. The members assumed that the actual plant area was fenced and that there was a control gate allowing access to the actual working area. In this case they suggested that the entrance to plant property should be at the gate to the fenced property or the doorway to any particular building where the entrance was directly from the public street.

Case 572 [A1.6 (f)]

An employee was walking to the restroom down an aisle five feet wide, level, dry, and free of any kind of obstruction. She fell and suffered a comminuted fracture of her left forearm. She was wearing wedgy heeled shoes, and stated that she did not black out, but just fell. A month previous to this accident the employee had done the same thing in her home, but upon examination by both her own doctor and the company doctor, she was found to be normal as far as physical defects, high blood pressure, etc.

Decision: The committee concluded that this accident should be included in the work injury rates on the basis that the fall occurred while the employee was going from one part of the plant to another, and there was no evidence that the fall arose out of a physical disability.

PUBLISHED AMERICAN STANDARDS

If your company is a member of the American Standards Association, you are entitled to receive membership service copies of these newly published American Standards. Find out who your ASA contact is in your company. Order your American Standards through him. He will make sure your company receives the membership service to which it is entitled.

BUILDING AND CONSTRUCTION

Places of Outdoor Assembly, NFPA 102; ASA Z20.3-1957 (Revision of Z20.3-1950) $0.50
Sponsor: National Fire Protection Association; Building Officials Conference of America

MECHANICAL

Slotted and Recessed Head Tapping Screws and Metallic Drive Screws, B18.6.4-1958 (Revision of B18.6-1947) $4.00
Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

PAINTS AND VARNISHES

Tinting Strength of White Pigments, Tentative Method of Test for, ASTM D 332-57T; ASA K56.1-1958 (Revision of ASTM D 332-55T; ASA K56.1-1956) $0.30
Sponsor: American Society for Testing Materials

PHOTOGRAPHY

Sensitometric Exposure of Daylight-Type Color Films, PH2.11-1958 $0.50
Sponsor: Photographic Standards Board

Focal Length Marking of Lenses, PH3.13-1958 (Revision of Z38.4.4-1942) $0.25

Distribution of Illuminance Over the Field of a Photographic Objective or Projection Lens, PH3.22-1958 $0.75
Sponsor: Photographic Standards Board

PIPES AND FITTINGS

Steel Butt-Welding Fittings, B16.9-1958 (Revision of B16.9-1951) $1.50

Butt-Welding Ends, B16.25-1958 (Revision of B16.25-1955) $1.00
Sponsors: Mechanical Contractors Association of America; Manufacturers Standardization Society of the Valve and Fittings Industry; American Society of Mechanical Engineers

AMERICAN STANDARDS UNDER WAY

Legend — Standards Council — *Approval by Standards Council is final approval as American Standard; usually requires 4 weeks.* Board of Review — *Acts for Standards Council and gives final approval as American Standard; action usually requires 2 weeks.* Standards Board — *Approves standards to send to Standards Council or Board of Review for final action; approval by standards boards usually takes 4 weeks.*

Status as of August 18, 1958

BUILDING AND CONSTRUCTION

American Standards Approved

Areas in School Buildings, Method of Determining, Z65.2-1958

Areas in Public Buildings, Method of Determining, Z65.3-1958
Sponsors: National Association of Building Owners and Managers; Office of Education, Department of Health, Education and Welfare

In Standards Board

Gypsum Wallboard Finishes, Specifications for, A97.1- (Revision of A97.1-1953)
Sponsors: American Institute of Architects; Gypsum Association

Installation of Glazed Ceramic Wall Tile in Cement Mortars, Specifications for, (Including Requirements of Related Divisions), A108.1-

Installation of Ceramic Mosaic Tiles in Cement Mortars, Specifications for, (Including Requirements of Related Divisions), A108.2-

Installation of Quarry Tile and Papers in Cement Mortars, Specifications for, (Including Requirements of Related Divisions), A108.3-
Sponsor: Tile Council of America

CHEMICAL INDUSTRY

American Standards Approved

Addenda (K62.1a-1958) to American Standard Procedure for the Acceptance of an American Standard Common Name for a Pest Control Chemical, K62.1-1956

Common Name for the Pest Control Chemical *O*-2-chloro-4-nitrophenyl *O*, *O*-dimethyl phosphorothioate (dicapthon), K62.14-1958

Common Name for the Pest Control Chemical 2-chloro-2-diethylcarbamoyl-1-methylvinyl dimethyl phosphate (phosphamidon), K62.15-1958

Common Name for the Pest Control Chemical *O*, *O*-dimethyl *S*-(*N*-methylcarbamoylmethyl) phosphorodithioate (dimethoate), K62.16-1958
Sponsor: U. S. Department of Agriculture

DRAWINGS, SYMBOLS AND ABBREVIATIONS

American Standards Approved

Graphical Symbols for Fluid Power Diagrams, Y32.10-1958
Sponsors: American Society of Mechanical Engineers; American Institute of Electrical Engineers

AMERICAN STANDARDS UNDER WAY—(cont'd)

ELECTRIC AND ELECTRONIC

American Standards Approved

Schedules of Preferred Ratings for Alternating- and Direct-Current Low Voltage Air Circuit Breakers, C37.16-1958 (Revision of C37.16-1956)
Sponsor: Electrical Standards Board

Ceramic Dielectric Capacitors, Classes 1 and 2, Recommendations for, C83.4-1958 (Revision of EIA REC-107-A; ASA C83.4-1955)

Electrolytic Capacitors (For Use Primarily in Transmitters and Electronic Instruments), Requirements for, C83.15-1958 (Revision of EIA TR-140; ASA C83.15-1956)

Circular Waveguides, Requirements for, EIA RS-200; ASA C83.19-1958

Vibrations for Auto Radios, Requirements for, EIA RS-187; ASA C83.20-1958 (Revision of EIA REC-113; ASA C16.16-1949)
Sponsor: Electronic Industries Association

In Standards Board

Definitions of Electrical Terms (Partial revision of C42-1941)
Group 15, Transformers, Regulators, Reactors, and Rectifiers, C42-15-
Group 50, Electric Welding and Cutting, C42.50- (Revision of C42.50-1956)
Sponsor: American Institute of Electrical Engineers

GAS-BURNING APPLIANCES

American Standards Approved

Addenda (Z21.1.1b-1958) to American Standard Approval Requirements for Domestic Gas Ranges, Volume I, Free Standing Units, Z21.1.1-1956

Addenda (Z21.1.2b-1958) to American Standard Approval Requirements for Domestic Gas Ranges, Volume II, Built-In Domestic Cooking Units, Z21.1.2-1956

Addenda (Z21.5b-1958) to American Standard Approval Requirements for Domestic Gas Clothes Dryers, Z21.5-1956

Addenda (Z21.6a-1958) to American Standard Approval Requirements for Domestic Gas-Fired Incinerators, Z21.6-1957

Installation of Domestic Gas Conversion Burners, Requirements for, Z21.8-1958 (Revision of Z21.8-1948)

Addenda (Z21.10.1b-1958) to American Standard Approval Requirements for Gas Water Heaters, Volume I, Z21.10.1-1956

Addenda (Z21.10.2b-1958) to American Standard Approval Requirements for Gas Water Heaters, Volume II, Side-Arm Type Water Heaters, Z21.10.2-1956

Addenda (Z21.11b-1958) to American Standard Approval Requirements for Gas-Fired Room Heaters, Z21.11-1956

Central Heating Gas Appliances, Approval Requirements for, Volume I, Steam and Hot Water Boilers, Z21.13.1-1958 (Revision of Z21.13.1-1956)

Central Heating Gas Appliances, Approval Requirements for, Volume II, Gravity and Forced Air Central Furnaces, Z21.13.2-1958 (Revision of Z21.13.2-1956)

Addenda (Z21.13.3b-1958) to American Standard Approval Requirements for Central Heating Gas Appliances, Volume III, Gravity and Fan Type Floor Furnaces, Z21.13.3-1956

Central Heating Gas Appliances, Approval Requirements for, Volume IV, Gravity and Fan Type Vented Recessed Heaters, Z21.13.4-1958 (Revision of Z21.13.4-1955)

Gas Valves, Listing Requirements for, Z21.15-1958 (Revision of Z21.15-1954)

Addenda (Z21.16a-1958) to American Standard Approval Requirements for Gas Unit Heaters, Z21.16-1957

Domestic Gas Conversion Burners, Listing Requirements for, Z21.17-1958 (Revision of Z21.17-1948)

Gas-Fired Duct Furnaces, Approval Requirements for, Z21.34-1958 (Revision of Z21.34-1955)
Sponsor: American Gas Association

HIGHWAY TRAFFIC

In Standards Board

Adjustable Face Traffic Control Signal Head Standards, D10.1- (Revision of D10.1-1951)

Pre-Time Fixed Cycle Traffic Signal Controls, D11.1- (Revision of D11.1-1943)

Traffic-Actuated Traffic Signal Controllers and Detectors, Specifications for, D13.1- (Revision of D13.1-1950)
Sponsor: Institute of Traffic Engineers

MECHANICAL

American Standards Approved

National Miniature Screw Threads, B1.10-1958
Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Knurling, B5.30-1958 (Revision of B5.30-1953)
Sponsors: American Society of Tool Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; American Society of Mechanical Engineers; Society of Automotive Engineers

Plain Washers, B27.2-1958 (Revision of B27.2-1953)
Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Double-Pitch Conveyor Chains, Attachments and Sprockets, B29.4a-1958 (Supplement to B29.4-1954)

Small Pitch Silent Chains and Sprocket Tooth Form (Less Than ⅜ Inch Pitch), B29.9-1958
Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Diamond Dressing Tools, B67.1-1958
Sponsors: Industrial Diamond Association of America; American Society of Tool Engineers

In Standards Board

Driving and Spindle Ends for Portable Air and Electric Tools, B5.38-
Sponsors: American Society of Mechanical Engineers; National Machine Tool Builders' Association; Society of Automotive Engineers; Metal Cutting Tool Institute; American Society of Tool Engineers

Slotted and Recessed Head Wood Screws, B18.6.1- (Revision of B18.6.1-1956)
Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Leaf Chain, B29.8-
Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Refrigeration Terms and Definitions, B53.1-
Sponsor: American Society of Refrigerating Engineers

MISCELLANEOUS

In Board of Review

Preferred Numbers, Z17.1- [Revision of Z17.1-1936 (R1951)]
Endorsing Sponsor: American Institute of Electrical Engineers

PHOTOGRAPHY

American Standards Approved

Photographic Roll Paper, Dimensions for, PH1.11-1958 (Revision of PH1.11-1953)

Brittleness of Photographic Film, Method for Determining the, PH1.31-1958
Sponsor: Photographic Standards Board

SAFETY

In Standards Board

Mechanical Refrigeration, Safety Code for, B9.1- (Revision of B9.1-1953)
Sponsor: American Society of Refrigerating Engineers

Withdrawal Being Considered

Leather Aprons, L18.1-1944

Leather Cape Sleeves and Bibs, L18.2-1944

Leather Leggings (Knee Length), L18.3-1944

Leather Coats, L18.4-1944

Leather Overalls, L18.5-1944

Leather Sleeves, L18.6-1944

Welders Leather Gauntlet Gloves, L18.7-1944

Protective Leather Gloves, Steel Stapled, L18.8-1944

Asbestos Gloves, L18.9-1944

Asbestos Gloves, Leather Reinforced, L18.10-1944

Asbestos Mittens, L18.11-1944

Asbestos Mittens, Leather Reinforced, L18.12-1944

Asbestos Aprons (Bib Type) L18.14-1944

Asbestos Cape Sleeves and Bibs, L18.15-1944

Asbestos Leggings (Knee and Hip Length), L18.16-1944

Asbestos Coats, L18.17-1944
Leather One-Finger Mittens, L18.18-1945
Leather Mittens, L18.19-1945
Asbestos One-Finger Mittens, L18.20-1945
Flame-Resistant Fabric Aprons (Bib Type), L18.21-1945
Flame-Resistant Fabric Leggings (Knee and Hip Length), L18.22-1945
Flame-Resistant Fabric Coats, L18.23-1945
Flame-Resistant Fabric Pants, L18.24-1945
Flame-Resistant Fabric Coveralls (Jumper Suits), L18.25-1945
Flame-Resistant Fabric Spats, L18.26-1945
Leather Spats, L18.27-1945
Asbestos Spats, L18.28-1945
Chemical-Resistant Gloves, L18.29-1945
Sponsor: Industrial Safety Equipment Association

WOOD AND WOOD PRESERVATIVES

In Standards Board

Testing Small Clear Specimens of Timber, ASTM D 143-52; ASA O4.1- (Revision of ASTM D 143-27; ASA O4a-1927)
Establishing Structural Grades of Lumber, Methods for, ASTM D 245-57T; ASA O4.3-
Wood Poles, Methods of Static Tests of, ASTM D 1036-55T; ASA O4.4-
Definitions of Terms Relating to Timber, ASTM D 9-30; ASA O4.5-
Domestic Hardwoods and Softwoods, Nomenclature of, ASTM D 1165-52; ASA O4.6-
Round Timber Piles, Specifications for, ASTM D 25-55; ASA O6.1- (Revision of ASTM D 25-37; ASA O6-1939)
Veneer, Plywood, and Other Glued Veneer Constructions, Methods of Testing, ASTM D 805-52; ASA O7.1-
Definitions of Terms Relating to Veneer and Plywood, ASTM D 1038-52; ASA O7.2-
Evaluating the Properties of Building Fiberboards, Methods of Test for, ASTM D 1037-56T; ASA O8.1-
Wooden Paving Blocks for Exposed Pave-

WHAT'S NEW ON AMERICAN STANDARDS PROJECTS

Fundamentals of Performance of Effluent Air and Gas Cleaning Equipment, Z74—

Sponsors: The American Society of Heating and Air Conditioning Engineers; The American Society of Mechanical Engineers

Robert H. Swoyer, mechanical research engineer, Pennsylvania Power and Light Company, Allentown, Pennsylvania, has been named chairman of committee Z74.

Robert H. Swoyer

In addition to chairmanship of Committee Z74, Mr Swoyer is chairman of the Anthracite-Lehigh Valley Section, American Society of Mechanical Engineers; and of the Research Committee of the National District Heating Association. He is a member of Pi Tau Sigma, honorary Mechanical Engineering Fraternity. Mr Swoyer represents the American Society of Mechanical Engineers on Committee Z74.

Safety for Compressed Air Machinery and Equipment, B19—

Sponsors: The American Society of Mechanical Engineers; American Society of Safety Engineers

A revision of the 1938 edition of "Safety Code for Compressed Air Machinery and Equipment" is now being circulated by the sponsors for comment. In its preparation the committee has consulted many sources and believes that the revised rules and procedures offer a summation of the best experience available.

Because the safe operation of compressor systems varies with the differing physical and chemical properties of the gases used, a classification is given of the different types of gases as an aid in determining the specific procedure or modification which the compressor designer and the process engineer must apply to achieve safe operating conditions. Three compressor service classifications are given, with reference to the sections in the standard that apply to that classification.

An interpretations subcommittee will be set up after the standard is approved and published to help in applying the provisions of the standard uniformly.

Copies of the draft standard can be obtained for review purposes by addressing D. M. Shackelford, Standards Administrator, The American Society of Mechanical Engineers, 29 West 39 Street, New York 18, N.Y.

All requests for copies should be submitted on letterhead.

Sizes of Shipping Containers, MH5—

Sponsors: American Material Handling Society; The American Society of Mechanical Engineers

Four major areas of work for the development of national standards for sizes of shipping containers were undertaken at the first meeting of committee MH5, July 30.

Members present authorized establishment of four subcommittees. These are for (1) pallet containers, (2) cargo containers, (3) van containers, and (4) international coordination. The international group will amass as much information as possible on similar work underway in standards bodies of other nations.

National interest in this ASA project is indicated by the 47 national

ments, Specifications for, ASTM D 52-20; ASA O9.1-

Creosoted End-Grain Wood Block Flooring for Interior Use, Specifications for, ASTM D 1031-55; ASA O10.1-

Modified Wood, Specifications for, ASTM D 1324-57T; ASA O12.1-
Sponsor: American Society for Testing Materials

Reaffirmation Requested

Static Tests of Timbers in Structural Sizes, Methods of, ASTM D 198-27; ASA O4b-1927
Sponsor: American Society for Testing Materials

organizations represented at the meeting. Requests for membership on MH5 are still being received.

Chairman of the committee is Herbert H. Hall, consultant engineer of Pittsburgh, Pa. Fred Muller, Jr, ACF Industries, serves as secretary.

Insulation Coordination, C92—
Sponsors: American Institute of Electrical Engineers; National Electrical Manufacturers Association.

A new sectional committee is being organized by the sponsors to develop standards on withstand voltages and creepage distances for external insulation.

The scope of the project is:

1. To study problems of coordination of insulation strength of the different types of apparatus used in electrical systems.
2. To develop coordinated minimum values for the external dielectric requirements of outdoor apparatus for power transmission and distribution, as follows:
   a. Wet and dry low frequency withstand test levels.
   b. Impulse withstand test levels.
   c. Altitude correction factors.
   d. Minimum creepage distance on insulation exposed to the weather.
3. To compile data and to prepare guiding principles for the use of Sectional Committees with respect to requirements for insulation strengths of various types of apparatus.
4. To assure the coordination of American and International Standards.

by **Cyril Ainsworth**

DINNSA

(Does Industry Need a National Standards Agency?)

The first objective prescribed for ASA by its constitution calls for systematic means by which organizations may cooperate in establishing American Standards. The second objective, discussed in part last month, directs ASA to stimulate organizations to develop standards suitable for approval as American Standard, and to create organizations for this purpose where appropriate organizations do not exist. These two objectives supplement and complement one another. In both cases, American Standards are to be the result.

Under the first objective, organizations are to cooperate. To do this effectively, and so that the result can be approved as American Standard, there must be rules governing the cooperation. Under the second, to stimulate organizations to develop standards may be desirable. But to stimulate them to develop standards suitable for approval as American Standard requires guides as to how the work must be done. To create organizations for the development of standards to be approved as American Standard also requires directives around which the new organization can be built.

To meet all these conditions, ASA has established its "Procedure." These rules, directives, and guides, together with the constitution and by-laws, form the fundamental documents that govern ASA operations.

The first two directives dictate the activities of ASA in the technical development of standards suitable for approval as American Standard. As discussed so far, they are not complete, because the second objective ends with a clause of very great significance. This is: ". . . but not to formulate standards." In other words, the constitution says, "ASA, do everything you can to get other organizations to cooperate in developing standards, stimulate other organizations to develop standards under their own operations, and if a suitable organization does not exist for the development of a certain standard, create an organization for the purpose, but" (and it is a big but) "ASA, stay out of the standards-formulating business yourself."

Throughout its forty years of operation, ASA has never developed a standard. The 1700 standards that ASA lists as American Standards are in every case the result of the work of another organization, whether that organization be a trade association, a technical society, a governmental agency, a public service body, a national committee, or a national conference. That is why these standards are not known as "ASA standards." ASA has established systematic means, rules, guides, and directives. By using these, any organization may develop a standard which can be studied by all concerned. If suitable for approval as an American Standard, it can be so approved by ASA and can then be included in the single consistent set of standards designated "American Standard."

In the technical process of standards development, the entire operation of ASA is designed (1) to encourage cooperation by the many organizations competent to formulate standards, and (2) to provide the machinery by which such cooperation may take place. In this way, ASA renders a national public service. It does so by making it possible for all to have the standards they need, without duplication of effort, but with assurance that the standards are completely consistent.

Mr Ainsworth has served for many years as technical director of the American Standards Association. He is now deputy managing director and assistant secretary.

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The standard was prepared by Sectional Committee A58 and sponsored by the National Bureau of Standards.

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